

1427

Alepes megalaspis (Bleeker)

Selar megalaspis Bleeker, Nat.
Tijds. Ned. Indie, vol. 5, p. 502,
1853 (type locality, Priaman, Sumatra);
vol. 12, p. 214, 1856 (Lias); Act.
Soc. Sci. Ind. Neerl., no. 9, vol. 3,
p. 3, 1857-58 (Trussan, Sumatra).

Caranx megalaspis Fowler, Journ.
Acad. Nat. Sci. Philadelphia, ser.
2, vol. 12, p. 510, pl. 13, upper figure,
1904 (Padang); Proc. Acad. Nat.
Sci. Philadelphia, 1905, p. 72
(Padang materials).

Can 30

Genus Pachymetopon Günther

Pachymetopon Günther, Cat. Fishes
British Mus., vol. 1, 1859, p. 424. Type

Pachymetopon grande Günther,
monotypic.

Body ovate. Teeth uniserial
incisors, with band of smaller conic
ones behind. No molars. No teeth in
palate. Scales small. Opercle scaly
and preopercle edge naked. Dorsal
and anal partly and caudal entirely,
scaly. Dorsal continuous, not notched,
and front soft dorsal and anal rays
not elevated as lobes.

Likely a single species in South
Africa and Madagascar.

Caranx(selar) megalaspis Weber and
Beaufort, Fishes Indo Austral.
Archipel., vol. 6, p. 219, 1931 (compiled).

355

23376. Alimango Bay, Burias Island. March 5, 1909. Length 52 mm.

14250. Candaraman Island, Balabac Island. January 4th 1909. Length 60 mm.

[D. 5360]. Corregidor Light, N. 74° W., 6.9 miles ($14^{\circ} 21' N.$, $120^{\circ} 41' E.$), Manila Bay, Luzon. In 12 fathoms. February 7, 1909. Length 77 mm.

23508. Dalaganan Island, vicinity of eastern Palawan. April 8, 1909. Length 55 mm.

17347, 17348, 17350. Isabel, Basilan Island, south of Zamboanga. September 11, 1909. Length 85 to 97 mm.

23714. Labuan Blanda Island, N. 88° E., 1 mile ($4^{\circ} 27' 00'' S.$, $122^{\circ} 55' 40'' E.$), Buton Strait. In 24 fathoms. December 14, 1909. Length 55 mm.

18570, 24040, 24043, 24044, 24046.

Malanipa Island, south of Zamboanga. September 8, 1909. Length 56 to 85 mm.

1429

Depth $2\frac{2}{3}$; head $3\frac{7}{8}$, width $2\frac{1}{8}$. Snout $3\frac{2}{3}$ in head from snout tip; eye $3\frac{1}{3}$, greater than snout, or interorbital; maxillary reaches $\frac{1}{5}$ in eye, length $2\frac{2}{5}$ in head from snout tip; interorbital 4, convexly elevated. Gill rakers $7 + 25$, little longer than gill filaments or trifle over 2 in eye.

Scales $30 + 40$ in lateral line, arch $2\frac{3}{4}$ in straight section; 10 scales above, 30 below. Scute depth $4\frac{1}{6}$ or less in body depth.

D. I, VIII - I, 25, third spine $2\frac{1}{2}$ in total head length, second ray $1\frac{3}{4}$; A. II - I, 20, first ray $2\frac{2}{5}$; least depth of caudal peduncle 5; ventral $3\frac{1}{3}$; pectoral $3\frac{1}{2}$ in

fish without caudal; caudal fin
 $3 \frac{1}{2}$, deeply forked.

Back and head above pale
slate gray, sides and below
bright silvery white. Large
blackish blotch nearly equal to
eye on upper part of opercle
and shoulder girdle, also
reflected inside gill opening.
Snout dusky above. Fins pale
brownish, upper portions of
dorsals and caudal dusky.
Iris yellowish.

East Indies, Philippines.

1431

22142, D. 5461. Caringod Island
(W.), N. 12° W., 4.9 miles (lat. 13°
 $57' 42''$ N., long. $123^{\circ} 06' 42''$ E.),
east coast of Luzon. In 11 fathoms.
June 14, 1909. Length 110 mm.

8853, 8854. Catbalogan, Samar.
April 15, 1908. Length 84 to 104 mm.

19599, 19600. Manila market.
January 13, 1908. Length ~~75~~ 75 to 88 mm.

9060. Manila market. June
24, 1908. Length 83 mm.

5372, 5373, 5375. Oton market.
March 30, 1908. Length 100 to 118 mm.

5598, 5600, 5601. Tacloban
market. July 25, 1909. Length 110 to
125 mm.

1895, p. 259 (Venez). $\frac{1}{m}$ Regan, Ann.
Natural Mus., 1908, p. 245 (Bird
Island). $\frac{1}{m}$ Pellegrin, Bull. Soc. Zool.
France, vol. 39, 1914, p. 224 (Fort
Dauphin, Madagascar). $\frac{1}{m}$ Von Bonde,
Fishes Marine Survey, Special Report 1,
1923, p. 16.

Sciaena antarctica Castelnau, Proc. Zool.
Acclimat. Soc., vol. 5, 1872, p. 100. Bass
Strait; Cape of Good Hope; Record London
Internat. Exhibition, 1873, pt. 7, no. 5, p.
11 ($\frac{1}{m}$ Macleay, Proc. Linn. Soc. New South Wales, vol. 5, 1881, p. 520).
 $\frac{1}{m}$ Woods, Fishes New South
Wales, 1883, p. 53, pl. 16. $\frac{1}{m}$ Ogilby,
Handbook of Sydney, 1898, p. 130. $\frac{1}{m}$
 $\frac{1}{m}$ White, Records Australian Museum, vol. 5, pt. 2, 1904, p. 63 (Mandurah, Western Australia).
 $\frac{1}{m}$ Stead, Fishes of Australia, 1906, p. 113, fig. 43
(New South Wales, Victoria, Queensland, South
Australia); Edible Fishes of New South
Wales, 1908, p. 66, pl. 37. $\frac{1}{m}$ Ogilby,
Commercial Fishes Fish. Queensland, 1916,
p. 23. $\frac{1}{m}$ Roughley, Fishes of Australia,

A. N. S. P., No. 27504. Padang,
Sumatra. A. C. Harrison and
H. M. Heller. Four examples.
Length to 128 mm.

Follow—Incl Caps
Loaded

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134789 119
Light blue with silvery reflections. Black spot on temple. Upper lip yellow. Ends of fins golden. (Sauvage.)

7 Seychelles. The types, obtained by Dussumier, were nearly 305 mm. long.

Lethrinus argenteus Valenciennes ← 1129

Lethrinus argenteus VALENCIENNES, Hist. Nat. Poiss., vol. 6, 1830, p.

303, (Seychelles). 1830 SAUVAGE, Hist. Nat. Madagascar Poiss., 1891, p. 199, pl. 23, figs. 2a-b (type).

type locality:
Depth $2\frac{3}{5}$; head 3, upper front profile straight. Snout $1\frac{7}{8}$ in head from snout tip; eye $3\frac{7}{8}$, 2 in snout, maxillary reaches $\frac{3}{4}$ to eye; expansion $1\frac{3}{4}$ in eye, length $2\frac{3}{4}$ in head from snout tip; teeth conic, small, more rounded in upper jaw; interorbital low, greater than eye.

Scales 55 in lateral line to caudal base and 6 more nontubular out over latter; 6 above, 17 below, predorsal scales forward opposite hind eye edge.

for. pinn.
D. X, 9 (XI, 8 on figure), second spine $2\frac{4}{5}$ in total head length, fourth ray $2\frac{1}{10}$; A. III, 8, second spine $3\frac{1}{2}$, first ray $2\frac{2}{3}$; caudal $1\frac{1}{5}$, deeply emarginate; least depth of caudal peduncle $3\frac{1}{8}$; pectoral $1\frac{1}{3}$; ventral $1\frac{2}{5}$.

Silvery, with nacry reflection; all fins rosy, except pectoral which yellowish. (Sauvage.)

Valenciennes gives 175 mm. as the length of his type. Sauvage says it is near Lethrinus fasciatus, but the latter differs in its convex profile. It suggests Lethrinus ramak, except the second dorsal spine is shown as the longest dorsal spine in Sauvage's figure. In this respect it surely approaches close to Lethrinus nematacanthus.

1433

Alepes mate (Cuvier)

Caranx mate Cuvier, Hist. Nat. Poiss.,
vol. 9, p. 40, 1833 (type locality,
Pondicherry; Seychelles; New Guinea;
Amber Strait). — Cantor, Journ. Asiatic
Soc. Bengal, vol. 18, pt. 2, p. 1107, 1849
(1850) (Pinang Sea).

— Day, Fishes of Malabar, p. 82, 1865;
Proc. Zool. Soc. London, p. 689, 1870.

— Fowler, Journ. Acad. Nat. Sci. Philadelphia,
ser. 2, vol. 12, p. 510, pl. 13, lower figure,
June 10, 1904 (Padang); Proc. Acad.
Nat. Sci. Philadelphia, p. 74, Jan. 1905
(Padang material).

head, except cheeks and opercles,
naked; ^{scales with} 10 or 11 basal radiating striae;
10 to 40 short apical denticles in 1 or
2 series; ~~small~~ circuli moderate.

D. VII - I, 9, I, fourth spine $2\frac{1}{5}$ to $2\frac{2}{5}$ in
head, first ray $1\frac{2}{3}$ to $1\frac{4}{5}$; A. II, 8, I,
second spine $2\frac{4}{5}$ to $3\frac{1}{5}$, first ray
 2 to $2\frac{1}{4}$; caudal $1\frac{1}{5}$ to $1\frac{1}{2}$, slightly
emarginate behind; least depth of
caudal peduncle $2\frac{1}{2}$ to $2\frac{3}{5}$; pectoral
 $1\frac{1}{2}$ to $1\frac{3}{5}$; ventral $1\frac{7}{8}$ to $1\frac{9}{10}$.

Pale brown, much lighter below,
whitish silvery reflections on opercles,
breast and space below pectorals.
Iris whitish, except as crossed by
horizontal dark ^{blackish brown} band extending
from snout tip to caudal base
medianly, narrowing to line on
caudal peduncle posteriorly and

— Fowler,
and Bean, Proc. U. S. Nat. Mus.,
vol. 62, art. 2, 1922, p. 19 (Cebu).
— Fowler and Ball, Bull. Bishop
Mus., no. 26, p. 12, 1925 (Midway Island).
— Fowler, Proc. Acad. Nat. Sci.
Philadelphia, vol. 79, 1927, p. 269
(Orion; Philippines); Mem. Bishop
Mus., vol. 10, p. 145, 1928 (Fiji; type
of Carangus politus; Hawaii; Honolulu;
Midway Islands); Proc. Acad. Nat.
Sci. Philadelphia, vol. 81, 1929, p. 605
(Hong Kong); Mem. Bishop Mus., vol. 11,
no. 5, p. 326, 1931 (Honolulu); Proc. Acad.
Nat. Sci. Philadelphia, vol. 86, 1934, p.

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caudal 1, deeply emarginate; pectoral $1\frac{1}{6}$; ventral $1\frac{1}{4}$.

Olive, fawn color below. On side nine vertical deep clove brown bands, each little narrower than interspaces, within which parallel alternate clove brown vertical line. Fins neutral dusky, ventral especially dark terminally.

Cape Colony, Natal, Portuguese East Africa, Madagascar.

53019 A.N.S.P. } Natal coast. H.W.
Bell Marley, 1925. } Length 215 mm.

441 (Surban, Katal).

1435

Alepes mate Fowler, Proc. Acad.
Nat. Sci. Philadelphia, vol. 87, p.
140, 1935 (~~Sriracha~~
Bangkok).

Depth $1\frac{9}{10}$; head $3\frac{2}{5}$, width $1\frac{7}{8}$.
Snout 3 in head; eye 4, $1\frac{2}{5}$ in snout,
equals interorbital; maxillary reaches
eye, expansion $2\frac{1}{2}$ in eye, length
3 in head; teeth uniserial incisors;
hind preopercle edge serrated;
interorbital 4. Gill rakers $8 + 15$,
lanceolate.

Scales 88 in lateral line; tubular
scales 69 in lateral line; 28 scales
above lateral line, 33 below, 60
predorsal; 15 rows across cheek.

Scales with 12 to 18 basal radiating
striae, 40 to 53 apical denticles,
with 3 to 7 transverse series of
basal elements; circuli fine.

D. X, 22, I, fourth spine $2\frac{1}{3}$ in
head, third ray $1\frac{1}{2}$; A. III, 14, I,
second spine $3\frac{1}{5}$, third ray $1\frac{1}{2}$;

Caranx xanthurus (Kuhl and Van Hasselt) Cuvier, Hist. nat. Poiss., vol. 9, p. 55, 1833 (type locality, Batavia).
— Bleeker, Verh. Batavia. Genoot. (Bali), vol. 22, p. 3, 1849 (west coast of Bali); (Madura), vol. 22, p. 4, 1849 (Kammal and Tangong); hed. Tijds. Dierk., vol. 2, p. 34, 1865 (Siam), p. 174 (reference); Arch. Néerl. Sci. nat. Harlem, vol. 2, p. 398, 1867 (Halmaheira); Verlagen Kon. Akad. Wet. Amsterdam, ser. 2, vol. 2, p. 293, 1868 (Rio, Bintang).
— Martens, Reise Preuss. Exped. Ost Asien, vol. 1, p. 341, 1876 (Singapore).

ones chisel like incisors, laterals more pointed; usually no inner rows, sometimes few small conic teeth, more or less concealed by fleshy pads. Scales uniformly small, present on head except on muzzle; entire cheek scaly. Spinous dorsal with margins of membranes notched, spines 10 besides recumbent spine in front, rays 17 to 23. Anal spines 3, rays 13 to 15. Front soft dorsal and anal rays little elevated as moderate pointed lobes. Caudal emarginate. Paired fins small.

Caranx raffinis Rüppell, Neue
Wirbelth. Fische, p. 49, pl. 14, fig. 1,
1835 (type locality, Massana, Red
Sea).

— Kner, Reise Novara, Fische, p. 157, 1865
(Java).

— Klunzinger, Verh. zool. bot. Gesell.
Wien, vol. 21, p. 459, 1871 (Red Sea).

— Day, Fishes of India, pt. 2, p. 219, pl.
49, fig. 4, 1876 (Madras). — Steindachner,
Sitzb. Ber. Akad. Wiss. Wien, math.-
naturw. Kl., vol. 83, pt. 2, p. 211.

— Day, Fauna British India, Fishes, vol. 2,
p. 158, 1889.

forms rounded spot size of pupil on caudal base. Fins all pale; dorsals slightly pale brownish, broadly dusky brown over anterior half, soft dorsal and anal each with subbasal longitudinal or horizontal dark band; upper and lower caudal edges narrowly dark; front ventral edges broadly brown.

Red Sea, Mozambique, Natal, Mauritius, Seychelles, India, East Indies, Philippines, Micronesia, Polynesia, Hawaii.

Caranx affinis Rüppell, Neue
Wirbelth. Fische, p. 49, pl. 14, fig. 1,
 1835 (type locality, Massana, Red
 Sea). — Vaillant, Bull. Soc.
Philomath. Paris, ser. 7, vol. 11, p.
 53, 1886-87 (Tahiti). — Seale,
Occas. Pap. Bishop Mus., vol. 1,
 no. 5, p. 166, 1902 (Honolulu). —
Evermann and Seale, Bull. Bur.
Fisher., vol. 26, p. 64, 1906 (1907)
 (Bulan). — Jordan and Richardson,
Bull. Bur. Fisher., vol. 27, p. 250,
 1907 (1908) ^{Mem. Carnegie Mus., vol. 4, no. 1, p. 178, 1909 (Faleas)} (Larite). — Beaufort,
Bijd. Dierk. Amsterdam, vol. 19, p.
 132, 1913 (Waigiu). — Fowler, Bull.
Bishop Mus., no. 22, p. 25, 1925
 (Honolulu).
 — McCulloch, Biol. Res. Endeavour, vol. 3,
 pt. 3, pt. 3, p. 130, April 21, 1915 (Broome,
 north-west Australia).

No. 2, 1914, p. 90 (Habits). $\frac{1}{m}$ Gilchrist
and Thompson, Ann. Durban Mus.,
vol. 1, pt. 4, 1917, p. 358 (references). $\frac{1}{m}$
Thompson, Marine Biology. Rep. South
Africa, no. 4, 1918, p. 86 (references). $\frac{1}{m}$
Fowler, Proc. Acad. Nat. Sci. Philadelphia,
1925, p. 233 (Natal). $\frac{1}{m}$ Barnard,
Ann. South African Mus., vol. 21, pt. 2,
1927, p. 635, pl. 25, fig. 2 (Walfish Bay,
Table Bay, False Bay, Natal, Delagoa
Bay).

Dipterodon multifasciatus Cellegrin,
Bull. Soc. Zool. France, vol. 39, 1914,
p. (229) 231. Fort Dauphin, Madagascar.

— Vinciguerra, Ann. Mus. Civ. Stor. Nat.
Genova, ser. 3, vol. 10, p. 561, Aug. 23,
1926 (Tarawaka).

Depth 3 to $3\frac{1}{2}$; head $2\frac{1}{2}$ to $2\frac{2}{3}$, width
2 to $2\frac{1}{5}$. Snout 4 to $4\frac{1}{8}$ in head; eye
3 to $3\frac{1}{3}$, greater than snout or
interorbital; maxillary reaches $\frac{1}{2}$ to
 $\frac{3}{5}$ in eye, expansion $2\frac{3}{5}$ to $2\frac{4}{5}$ in
eye, length 2 to $2\frac{1}{8}$ in head; bands
of villiform teeth in jaws, on vomer
and palatines; bony interorbital
5 to $6\frac{1}{4}$, nearly level; preopercle
ridge and edge finely serrated,
also lower edge of narrow infraorbitals.
Gill rakers 4 + 13, of which 2
above and 4 below rudimentary,
others lanceolate or equal gill
filaments, which 3 in head.

Scales 22 or 23 in lateral line to
caudal base and 3 or 4 more on latter,
2 above, 6 below, 4 predorsal, 2 rows
on cheek to preopercle ridge;

Caranx (Selar) affinis Klunzinger,
Fische Roth. Meer., vol. 1, p. 97, 1884.

Caranx (Atule) affinis Waksya, Ann.
Carnegie Mus., vol. 15, p. 200, pl. 30, fig.
1, 1924 (Formosa; Ryukyu).

Proc. Acad. Nat. Sci. Phila., 1906, p. 527
(Hawaiian Islands).

Amia nyderi Jordan and Evermann,
Bull. U. S. Fish Comm., vol. 22, pt. 1,
1903 (1905), p. 214 (Honolulu and Hilo). —
Jordan and Seale, Bull. Bur. Fisher.,
vol. 25, 1905 (1906), p. 237 (Apia and
Pago Pago).

Apogon menesemus Jenkins, Bull. U. S. Fish
Comm., vol. 22, 1902 (1903), p. 448, fig. 19.
Honolulu. — Fowler, Proc. Acad. Nat. Sci.
Phila., 1906, p. 527 (Hawaiian Islands).

Apogon evanidus Fowler, Journ. Acad. Nat.
Sci. Phila., ser. 2, vol. 12, 1904, p. 518. Padang,
Sumatra; Proc. Acad. Nat. Sci. Phila., 1906,
p. 527 (type).

Apogon holotaenia Regan, Journ. Bombay
Nat. Hist. Soc., vol. 16, no. 2, 1905, p. 319
(331). Inscat, in 15 to 30 fathoms.

Caranx (Selar) affinis Steindachner,
Denks. Akad. Wiss. Wien, math.
naturw. Kl., vol. 70, p. 195, 1901
(Honolulu).

Carangus affinis Jordan and Evermann,
Bull. U. S. Fish Comm., vol. 23, pt. 1,
p. 195, fig. 76, 1903 (1905) (Honolulu).

Astute affinis Jordan and Jordan,
Mem. Carnegie Mus., vol. 10, no. 1, p.
38, December 1922 (Honolulu).

Selar affinis Barnard, Ann. South
African Mus., vol. 21, pt. 2, p. 538,
Oct. 1927 (Natal coast).

Ashima, Philippine Journ. Sci., ~~vol.~~ vol.
26, no. 3, p. 380, March 1925 (compiled).

Comp 129

Coracinus capensis (Cuvier)

- Dipterodon capensis Cuvier, Hist. Nat. Poiss., vol. 7, 1831, p. 276, pl. 188. Cape of Good Hope. $\frac{1}{m}$ Valenciennes, Règne Animal, Cuvier, Ill. Poiss., 1839, pl. 43, fig. 2.
- $\frac{1}{m}$ Pappe, Synop. Edible Fishes Cape, 1853, p. 23 (Western division of Colony). $\frac{1}{m}$ Günther, Cat. Fishes British Mus., vol. 1, 1859, p. 426 (Cape of Good Hope). $\frac{1}{m}$ Bleeker, Natuurk. Tijdschr. Nederl. Indië, vol. 21, 1860, p. (50, 53) 63 (Cape of Good Hope). $\frac{1}{m}$ Castelnau, Mém. Poiss. Afrique Australe, 1861, p. 34 (West Coast and Table Bay).
- $\frac{1}{m}$ Peters, Monatsb. Akad. Wiss. Berlin, 1876 (1877), p. 833 (Cape of Good Hope). $\frac{1}{m}$ Gilchrist and Thompson, Ann. South African Mus., vol. 6, 1908-11, p. 165 (Natal).
- $\frac{1}{m}$ Lempe, Deutsche Sudpolar Exped., vol. 15, pt. 2, 1914, p. 235 (Simonstown). $\frac{1}{m}$ Gilchrist, Marine Biology. Rep. South Africa,

Nelar hasseltii Bleeker, Nat.
Tijds. Ned. Indië, vol. 1, p. 359,
1850 (type locality, Batavia;
Cheribon; Surabaya); vol. 3, p.
717, 1852 (Karang hadji, Banka);
Verh. Batavia. Genoot. (makreel.),
vol. 24, p. 53, 1852 (Batavia;
Cheribon; Surabaya); Nat. Tijds.
Ned. Indië, vol. 5, p. 319, 1853
(Amboina); vol. 6, p. 51, 1854
(Sindangole, Halmaheira); vol. 7,
p. 227, 1854 (Macassar), p. 312
(Bantern, Tjiringin); vol. 8, p. 393,
1855 (Amboina); vol. 9, p. 282, 1855
(Macassar), p. 492 (Batjan); Act.
Soc. Sci. Ind. Neerl., no. 5, vol. 1,
p. 6, 1856 (Amboina); no. 7, vol. 2,
p. 5, 1857 (Amboina); Nat. Tijds.
Ned. Indië, vol. 20, p. 198, 1859-60
(Badjoa), p. 237 (Singapore), p. 449 (Singapore).

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Genus Coracinus Gronow

Coracinus Gronow, Zoophylacii, 1766, p. 66. Type Coracinus cauda-lunata Gronow = Dipterodon capensis Cuvier, designated by Jordan and Evermann, Genera of Fishes, pt. 1, 1917, p. 19.

Dipterodon (not Lacépède¹⁸⁰³) Cuvier, Règne Animal, ed. 2, vol. 2, 1829, p. 194. Type Dipterodon capensis Cuvier, monotypic. (Not available as genus and species not described.) — Hist. Nat. Poiss., vol. 7, 1831, p. 274. Type Dipterodon capensis Cuvier, monotypic.

Dichistius Gill, Proc. U. S. Nat. Mus., vol. 11, 1888, p. 68. Type Dipterodon capensis Cuvier. Dichistius Gill proposed to replace Dipterodon Cuvier.

Body deeply ovate. Head moderate, obtuse. Snout short. Eye small, advanced. Mouth small. Teeth uniserial, front

Caranx hasseltii Günther, Cat. Fish.
Brit. Mus., vol. 2, p. 430, 1860 (Amboina;
Moluccas). — Playfair, Fishes of
Zanzibar, p. 59, 1866 (Seychelles).

— Weber, Zool. Forschungsr. Senar.,
vol. 5, p. 266, 1895.

1884, p. 22.

Amia frenata Bleeker, Atlas Ichth.

Ind. Néerl., vol. 7, 1873-76, p. 89 (Celebes, Ternate, Batjan, Buru, Ceram, Amboina, Goram, New Guinea); vol. 8, 1876-77, pl. (64) 342, fig. 2. — Fowler, Copeia, no. 58, June 18, 1918, p. 63 (Philippines);

Bishop Mus. Bull., no. 22, 1925, p. 8 (Guam), p. 25 (Honolulu); Proc. Acad. Nat. Sci. Phila., 1927, p. 274 (Philippines).

Amia frenata Evermann and Seale, Bull. Bur. Fisher., vol. 26, 1906 (1907), p. 71 (Bacon).

Lipogon vittiger Bennett, Proc. Zool. Soc. London, vol. 1, 1833, p. 32. Mauritius. —

Regan, Trans. Linn. Soc. London, vol. 12, ser. 2, 1907, p. 225 (Coetivy, Seychelles Group).

Caranx hasselti Macleay, Proc.
Linn. Soc. New South Wales, vol.
7, ~~pp. 3, 4, 185~~ p. 356, 1882 (New Guinea).
— Jordan and Seale, Proc. U. S.
Nat. Mus., vol. 28, p. 776, 1905 (Negros);
Bull. Bur. Fisher., vol. 26, p. 13,
1906 (1907) (Cavite).

Caranx hasselti Fowler, Copeia, no.
58, p. 63, June 18, 1918 (Philippines).

round spot. dorsal and caudal like
back, other fins whitish. Iris gray
brown, with narrow golden circle
around pupil.

Hawaii. Known only from the type.
50664 U. S. N. M. Heeia, Oahu.

Bureau of Fisheries (03363). Length
368 mm. Type.

Carangus politus Jenkins, Bull.
U. S. Fish Comm., vol. 22, p. 445, fig.
17, 1902 (1903) (type locality,
Honolulu). — Jordan and Evermann,
Bull. U. S. Fish Comm., vol. 23, pt. 1,
p. 194, 1903 (1905) (type; Honolulu).
Aetide polita Jordan and Jordan, Mem. Carnegie Mus.,
vol. 10, no. 1, p. 38, Dec. 1922 (Honolulu).

Caranx mauritanus (not Duoy and
Gaimard) Streets, Bull. U. S. Nat.
Mus., no. 7, p. 68, 1877 (Honolulu).

~~Salax~~

Decapterus lundini Jordan and Seale,
Bull. Bur. Fisher., vol. 25, p. 229,
fig. 27, 1905 (1906) (type locality,
Pago Pago, Samoa).

Caranx affinis lundini Nichols,
Amer. Mus. Novit. New York, no. 50, p.
1, October 24, 1922 (Hawaiian Islands).
Aetide lundini Jordan and Jordan, Mem.
Carnegie Mus., vol. 10, no. 1, p. 38, 1922² (Honolulu).
Dec.

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scales all small toward body edges.
Scales with 4 basal radiating striae;
65 apical series of striae.

D. XI, 15, I, last spine 3 in head,
first ray $3\frac{2}{3}$, last ray $3\frac{1}{4}$; A.
III, 13, I, third spine $4\frac{1}{5}$, first ray
 $2\frac{3}{4}$; caudal peduncle $3\frac{1}{10}$; pectoral
 $1\frac{3}{4}$; ventral $2\frac{1}{8}$; caudal deeply
forked, lobes slenderly pointed,
 $3\frac{2}{5}$ (tips damaged) in combined head
and body to caudal base.

Back and head above number to
median axis of body - at which
longitudinal blackish band, narrow
from snout end to and along lower
eye edge to pectoral base, behind
which 3 or 4 scales wide with each
scale with contrasted small white
spot. Lower half of body whitish,
each scale also with white or pale

1446

Scomber bimaculatus (Ehrenberg)
Klunzinger, Fische Roth. Meer., Vol. 1,
p. 97, 1884 (name in text).

Apogon melanorhynchus Bleeker, Nat.
 Tijds. Ned. Indië, vol. 3, 1852, p. 255.
Wahai, North Ceram.

Apogon melanorhynchus Weber, Siboga
Exped., vol. ~~65~~^{57, Fishes}, 1913, p. 227 (Musa Laut
and Low Key).

Amia melanorhynchus Bleeker, Atlas
Ichth. Ind. Néerl., vol. 7, 1873-76, p. 90
(Singapore, Bawean, Celebes, Ternate,
Buru, Ceram, Amboina); vol. 8, 1876-77,
pl. (65) 343, fig. 1.

Apogon endekataenia (non Bleeker) Day,
Fishes of India, pt. 1, 1875, p. 57, pl. 16, fig.
1.

Apogon fasciatus (non Shaw) Day, Fauna
Brit. India, vol. 1, 1889, p. 474 (part).

Apogon snyderi Jordan and Evermann,
Bull. U. S. Fish Comm., vol. 22, 1902 (1903),
p. 180. Honolulu and Hilo; op. cit., vol. 23,
pt. 1, 1903 (1905), pl. 36 (type). — Fowler,

Decapterus kurra (not Bleeker)
Fowler, Copeia, no. 58, p. 63, June
18, 1918 (one Philippine example).

Selar cruenophthalmus (not
Bloch) Fowler, Mem. Bishop Mus.,
vol. 10, p. 144, 1928 (on Streets).

Cover 29

Sectator azureus Jordan and Evermann
Sectator azureus Jordan and Evermann,
Bull. U. S. Fish Comm., vol. 22, 1902
(1903), p. 185. Near Heeia, Oahu Island,
Hawaii; ~~op. cit.~~, vol. 23, pt. 1, 1903 (1905),
p. 248, pl. 20 (type). ¹/_m Fowler, Mem.
Bishop Mus., vol. 10, 1928, p. 222 (type).

Depth 3; head 4, width $1\frac{2}{3}$. Snout
 $3\frac{2}{3}$ in head; eye $4\frac{4}{5}$, $1\frac{1}{4}$ in snout,
 $2\frac{1}{4}$ in interorbital; maxillary reaches
 $\frac{7}{8}$ to eye, expansion 2 in eye, length
4 in head; jaws about even; teeth
in jaws uniserial, compressed, very
small; interorbital $2\frac{1}{6}$, convexly
elevated. Gill rakers 8 + 20, lanceolate,
 $1\frac{1}{2}$ in gill filaments, which equal eye.

Scales 68 in lateral line to caudal
base and 12 more on latter; tubes
in lateral line small, largely concealed;
14 scales above, 20 below, 65 predorsal;

Depth $2\frac{2}{3}$ to $3\frac{1}{4}$; head $3\frac{1}{8}$ to $3\frac{4}{5}$, width $1\frac{7}{8}$ to $2\frac{1}{5}$. Snout $3\frac{1}{4}$ to $3\frac{3}{4}$ in head from snout tip; eye 3 to $3\frac{7}{8}$, subequal with to $1\frac{1}{8}$ in snout, $1\frac{1}{8}$ to $1\frac{1}{4}$ in interorbital; maxillary reaches eye, expansion $2\frac{1}{5}$ to $2\frac{11}{4}$ in eye, length $2\frac{2}{3}$ to $2\frac{3}{4}$ in head from snout tip; interorbital $3\frac{1}{8}$ to 4, convexly elevated, with median keel. Gill rakers 11 to 14 + 24 to 32, finely lanceolate, equal gill filaments or $1\frac{1}{4}$ in eye.

Scales 40 + 38 to 48 in lateral line (last 8 on caudal base); arch $1\frac{1}{4}$ in straight section, which begins about opposite base of fourth or fifth dorsal ray; 10 or 11 scales above lateral line arch, 25 or 26 below to soft anal origin.

D. I, VIII — I, 23 or 24, last ray largely free, third spine 2 to $2\frac{1}{8}$ in total head, first branched ray 2; A. II — I, 19 or 20, last ray largely free, first branched ray $2\frac{1}{4}$ to $2\frac{2}{5}$; caudal $1\frac{1}{5}$ to $1\frac{1}{4}$, triangular, deeply emarginate; least depth of caudal peduncle 8 to $8\frac{1}{3}$; ventral 2, rays I, 5; pectoral rays I, 19 or 20, length $3\frac{1}{4}$ to $3\frac{3}{4}$ in fish without caudal.

Back gray brown or drab, lower half of body silvery white. Iris whitish. Large blackish brown blotch on opercle, also reflected on shoulder girdle about size of pupil. Fins all pale. About dozen dark gray transverse parallel bands on side of body and back, each band wider than pale interspace.

Red Sea, Arabia, Natal,
Madagascar, Seychelles, India,
Ceylon, Andamans, Malaya,
East Indies, Tonkin, Philippines,
Formosa, Riu Kiu, North west
Australia, Hawaii.

9061. Little Santa Cruz,
Zamboanga. May 26, 1908. Length
91 mm.

8615, 8616. Matnog Bay.
June 11, 1909. Length 259 to 275 mm.
9341, ⁹³⁴²9342. Murciélagos Bay,
Mindoro. August 21, 1909.
Length 293 to 315 mm.

A658. Simalue Sibi Sibi
Island. September 23, 1909.
Length 285 mm.

5599, 5602, 5607. Tacloban
market. July 25, 1909. Length 96
to 127 mm.

9192 to 9198. Tilig, Lubang
Island. July 25, 1909. Length
164 to 178 mm.

7696. Ulugan Bay, Palawan.
December 29, 1908. Length 250 mm.

series 2, vol. 2, 1866, p. 145 (Madagascar).
+ ¹/_m Sauvage, Hist. nat. Madagascar,
Poiss., 1891, p. 349. + ¹/_m Barnard, Ann.
South African Mus., vol. 21, pt. 2, 1927,
p. 569 (Luderitzbucht, Table Bay, False
Bay, Natal, Delagoa Bay, to 200 fathoms).
Sciaena capensis Andrew Smith, Illustr.
Zool. South Africa, Fishes, vol. 4, 1849,
pl. 15.

Sciaena aquila (not Lacépède) Günther, Cat.
Fishes Brit. Mus., vol. 2, 1860, p. 291 (Algoa
Bay). + ¹/_m McCoy, Rep. Melbourne Internat.
Exhib., 1866, p. 317. + ¹/_m Schmeltz, Cat.
Mus. Godeffroy, vol. 6, 1877, p. 14 (Sydney).
+ ¹/_m Castelnau, Proc. Linn. Soc. New South Wales,
vol. 2, 1878, p. 232 (Brisbane; Sydney);
vol. 3, 1879, p. (351) 381 (Port Jackson).
+ ¹/_m Ogilby, Edible Fishes New South Wales,
1893, p. 72, pl. 22. + ¹/_m Steindachner, Zool.
Anzeiger, vol. 32, nos. 24-25, November 21,

A 911 and A 912. Limbe Strait,
Celebes. November 11, 1909. Length
285 to 290 mm.

Case 179

1602

Johnius hololepidotus (Lacépède)

Labrus hololepidotus Lacépède, Hist.

Nat. Poiss., vol. 3, 1802, pp. 448, 518, pl.

21, fig. 2. Great Equatorial Ocean.

Sciaena hololepidotus Cuvier, Hist. Nat.

Poiss., vol. 6, 1830, p. 53 (Cape of Good Hope;
St. Dauphin, Madagascar). $\frac{1}{m}$ Andrew

Smith, Illustr. Zool. South Africa, Fishes,
1849, pl. 15 (Cape Town). $\frac{1}{m}$ Tappe, Synopsis

Edible Fishes South Africa, 1853, p. 15
(Cape of Good Hope). $\frac{1}{m}$ Castelnau, Mém.

Poiss. Afrique Australe, 1861, p. 9 (Cape
of Good Hope). $\frac{1}{m}$ Tappe, Synopsis Edible Fishes South Africa, ed. 2, 1866,
p. 11 (South Africa).

Sciaena hololepidota Quoy and Gaimard,

Voyage Ustrolabe, Zool. vol. 3, 1830, p. 697,
pl. 12, fig. 1 (Cape of Good Hope). $\frac{1}{m}$ Bleeker,

Naturk. Tijdschr. Nederland. Indië, vol.
21, 1860, p. (50, 52) 63 (Cape of Good Hope).

$\frac{1}{m}$ Guichenot, Mém. Soc. Sci. Nat. Cherbourg,

U. S. N. M., no. 17998. Honolulu.
Dr. J. H. Streets. Length 238 mm.
As Trachurops mauritanus.

U. S. N. M., no. 51980. Negros,
Philippines. Dr. B. Dean.
Length 98 mm. As Caranx hasselti.

U. S. N. M., no. 52716. Hawaiian
Islands. Bureau of Fisheries
(02928). Length 235 mm. As
Carangus affinis.

U. S. N. M., no. 55093. Honolulu.
Albatross Collection. Length 208?
mm.

U. S. N. M., no. 55534. Honolulu.
Dr. O. P. Jenkins. Length 210 mm.
As Carangus affinis.

U. S. N. M., no. 84175. Philippines.
Dr. Fred Baker. Length 124? mm.

U. S. N. M., no. 51727. Samoa.
Bureau of Fisheries (04731). Length
184 mm. Type of Decapterus lundini.

134720

Family SPARIDAE

Body compressed, oblong ovate, usually somewhat elevated. Maxillary slips below preorbital most its length. No supplemental maxillary. Mouth small, nearly horizontal, somewhat protractile. Teeth villiform, conic, incisor or molar-like, seldom (Erynnis) or absent from vomer or palatines. Nostrils paired. Gill membranes free from isthmus. Gills 4, slit behind fourth. Pseudobranchiae present. Air bladder present. Pyloric few. Scales mostly large, weakly crenulate or hardly ctenoid. Ventral with axillary flap. Lateral line single. Dorsal single, sometimes deeply notched. Anal spines 3. Caudal forked or emarginate. Ventrals thoracic, with spine and 5 rays.

A large family of shore fishes, carnivorous, some living in bays and estuaries. Mostly abundant in tropical or subtropical regions. Most all reproduce by pelagic eggs. Many species are valued food fishes, while others are sought for their angling qualities.

Analysis of genera

a¹. Canines in one or both jaws, no incisors, molars on vomerine teeth; fins often with filaments, sometimes produced.

☐ b¹. Symphorinae. Front soft dorsal and anal rays end in long produced rays; coloration brilliant. ————— Symphorus

☐ b². Dorsals, caudal and ventrals sometimes with filaments, not anal.

☐ c¹. Pentapodinae. Outer of anterior slightly enlarged

for front canines in jaws usually flaring outward. ————— Pentapodus

☐ d¹. Denticinae. Canines few, anterior, not flaring outward.

A. N. S. P., one example. Philippines.
Commercial Museums of Philadelphia.
As Caranx hasseltii.

A. N. S. P., one example. Philippines.
Commercial Museums of Philadelphia.
As Decapterus kurra.

A. N. S. P., six examples. Orion.
1923. Rev. Joseph Clemens. Purchased.

A. N. S. P., seven examples. Philippines.
1923. Rev. Joseph Clemens. Purchased.

3/6

Loaded
Follow—Incl Caps

108

Genus Neolethrinus Castelnau ← 130

Neolethrinus CASTELNAU, (Res. Fish. Austral.) (Victoria Off. Rec. Philadelphia Expos., 1875, p. 11. Type, Neolethrinus similis CASTELNAU, orthotypic.)

Like Lethrinus except whole palate and all inside of mouth with small molar teeth.

One species in Queensland.

Neolethrinus similis Castelnau

Neolethrinus similis CASTELNAU, (Res. Fish. Australia) (Victoria Off. Rec. Philadelphia Expos., 1875, p. 12. (Cape York, Queensland. — MACLEAY, Proc. Linn. Soc. New South Wales, vol. 5, 1881, p. 415 (on Castelnau).)

Depth $2\frac{2}{3}$; head $2\frac{2}{3}$. Eye $3\frac{1}{2}$ in head; mouth rather extensible and pointed, cleft oblique. Lateral line with 22 scales. D. X, 9; A. III, 8; caudal bilobed. Gray. Large square obscure spot on most scales of back. On lower part of body traces of (2 or 3) slight longitudinal stripes of yellow tinge. Head rather purple, with ocellated round white spots on cheek. Throat white. Fins transparent, rather yellow. Membranes of spinous dorsal somewhat nebulous. Length, 100 mm. (Macleay.)

4 Queensland.

1455
Alepes tabulae (Barnard)

Selar tabulae Barnard, Ann. South
African Mus., vol. 21, pt. 2, p. 538,
Oct. 1927 (type locality, Table Bay,
South Africa).

Depth $3\frac{1}{2}$; head $3\frac{1}{2}$. Eye 4 in head, $1\frac{1}{3}$ in snout, $1\frac{1}{3}$ in inter-orbital, hind adipose eyelid well developed; maxillary reaches below front edge of eye or slightly further; lower jaw projects; teeth very small, uniserial and nearly obsolete in jaws, in narrow bands on vomer, palatines and tongue; vomer with transverse anterior and a median band. Lower gill rakers 55.

Breast, ~~including~~ and head, including interorbital but not snout, scaly. Lateral line moderately curved. Scutes 39, begin below sixth or seventh dorsal ray, their margins denticulate.

Amia frenata (Valenciennes)

Apogon frenatus Valenciennes, Nouv. Ann. Mus. Hist. Nat. Paris, vol. 1, 1832, p. 57, pl. 4, fig. 4. New Guinea and Guam.

Apogon frenatus Günther, Cat. Fishes Brit. Mus., vol. 1, 1859, p. 241 (Fiji); Journ.

Mus. Godeffroy, vol. 1, pt. 1, 1873, p. 19, pl.

19, fig. A (Hawaiian, Society and Tuamotu

Islands). — Day, Fishes of India, pt. 1,

1875, p. 58, pl. 16, fig. 4. — Peters, Monatsb.

Akad. Wiss. Berlin, 1876, p. 436 (Mauritius)

— Day, Fauna Brit. India, vol. 1, 1889, p.

493. — Steindachner, Abhandl. Senckenberg.

Naturf. Gesell., vol. 25, 1903, p. 416

(Ternate and Batjan). — Weber, Siboga

Exped., vol. ^{57, Fishes} 65, 1913, p. 227 (Biaru,

Salibabu, west Ceram). — Barnard, Ann. South

Afr. Mus., vol. 2, 1927, p. 518 (Katal coast, Mozambique).

Apogon (Pristiapogon) frenatus Klunzinger,

Verh. zool. bot. Ges. Wien, vol. 20, 1870, p.

715 (Koseir, Red Sea); Fische Roth. Meer.,

D. I, VIII, I, 38; A. II - I, 30;
pectoral falcate, equals head.

Silvery, darker above.

Opercle with black spot. Spinous
dorsal blackish, soft dorsal and
anal dusky. Length 410 mm.
(Barnard.)

South Africa.

246
8036 and 8303. Tourminclao Island.
February 26, 1908. Length 78 to 93 mm.
Male with buccal ova.

23173 and 23174. Tutu Bay, Jolo
Island, first anchorage. September 19,
1909. Length 70 to 95 mm.

23119. Labuan data Bay, Gulf of Boni,
Celebes. December 18, 1909. Length 77 mm.

23889 and 23890. Pendek Island,
Buton Strait. December 15, 1909. Length
61 to 71 mm.

Genus Caranx Lacépède

Caranx (Commerson) Lacépède, Hist.
Nat. Poiss., vol. 3, p. 57, 1802.

(Type Scomber carangus Bloch
= Scomber hippos Linnaeus,
designated by Desmarest, Encyc.
Hist. Nat. Rept. Poiss., Chenu,
p. 272, 1874.)

Trichopterus Rafinesque, Car.
Innov. Animal. Sicil., p. 41, 1810.
(Atypic. Type Scomber carangus
Bloch, designated by Jordan
and Evermann, Genera of Fishes,
pt. 1, p. 79, 1917.)

Carangus Griffith, Animal. Kingd.
Cuvier, Fish., p. 325, 1837.
(Atypic. Type Scomber carangus
Bloch, tantotype.)

Selenia (not Hübner 1816) Bonaparte,
 Cat. Method. Pesc. Europ., p. 75, 1846.
 (Type Caranx luna Geoffroy St.
Hilaire, monotypic.)

Carangichthys Bleeker, op. cit., vol.
 3, p. 760, 1852. (Type Carangichthys
typus Bleeker, monotypic.)

8 pt. Leaded
Follow-Incl Caps

Sparus latus Houttuyn

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Sparus latus HOUTTUYN, Verh. Holland. Maatsch. Wet. Haarlem, vol. 20,

(1788, p. 322) (Japan). - BONNATERRE, Tabl. Ichth., (1788, p. 102) (seas of Japan). - GMELIN, Syst. Nat. Linn., vol. 1, (1789, p. 1276) (Japanese seas). - WALBAUM, Artedi Pisc., vol. 3, (1792, p. 300) (on GMELIN). - FORSTER, Fauna Indica, (1795, p. 15). - SCHNEIDER, Syst. Ichth. Bloch, (1801, p. 284) (Japan). - JORDAN and THOMPSON, Proc. U.S. Nat. Mus., vol. 41, (1912, p. 583, fig. 10) (Kobe and Wakanoura). - SNYDER, Proc. U.S.

Nat. Mus., vol. 42, (1912, p. 415) (Tokyo and Kagoshima). - JORDAN and THOMPSON, Mem. Carnegie Mus., vol. 6, No. 4, (1914, p. 256) (Osaka). - IZUKA and MATSUURA, Cat. Zool. Spec. Tokyo Mus., Vertebr., (1920, p. 149) (Tsu, Ise). - JORDAN and HUBBS, Mem. Carnegie Mus., vol. 10, No. 2, (1925, p. 240) (Bay of Mikawa). - OSHIMA, Jap. Journ. Zool. Trans. Abstr., vol. 1, No. 5, March 31, (1927, p. 151) (Tainan). - SCHMIDT, Trans. Pac. Comm. Acad. Sci. U.S.S.R., vol. 1, (1930, p. 50) (Kominato, Riu Kiu).

Coilus datnia BUCHANAN-HAMILTON, Fishes of Ganges, 1822, pp. 88, 369, pl.

9, fig. 29 (All mouths of the Ganges).

Chrysophrys datnia DAY, Fishes of India, pt. 1, 1875, p. 140, pl. 34, fig.

1 (Hooghly River at Calcutta); Fauna Brit. India, Fishes, vol. 2, 1889, p. 44, fig. 17. - OGILBY, Handb. Sydney, (1898, p. 129). - LLOYD, Rec. Indian Mus., vol. 1, (1907, p. 226) (Akyab). - ZUGMAYER, Abh. Bayer. Akad. Wiss., Math.-phys. Kl., vol. 26, pt. 6, (1913, p. 11) (Mekran). - TIRANT, Service Océanogr. Pêch. Indo-Chine, 1929, Note 6, p. 168 (Cochin China).

Chrysophrys datnia PELLEGRIN, Ann. Mus. Zool. R.Univ. Napoli, ^{new} ser.,

vol. 3, No. 27, July 11, (1912, p. 6) (Massaoua).

Paratractus Gill, Proc. Acad. Nat. Sci. Philadelphia, 1862, p. 330. (Type Caranx pisgnetus Cuvier, orthotypic.)

Pseudocaranx Bleeker, Nat. Verh. Holland. Maatsch. Haarlem, vol. 18, No. 2, p. 82, 1863. (Type Scomber dentex Schneider, monotypic.)

Elaphrotoxon Fowler, Proc. Acad. Nat. Sci. Philadelphia, 1905, p. 76. (Type Scomber ruber Bloch, orthotypic.)

Oxillicaranx Fowler, op. cit., 1905, p. 76. (Type Caranx africanus Steindachner = Caranx senegallus Cuvier, orthotypic.)

Longirostrum Wakiya, Ann. Carnegie
Mus., vol. 15, July 1924, pp. 164, 202.
(Type Caranx luna Geoffroy St.
H. Claire virtually, as Longirostrum
Wakiya proposed to replace Sealenia
Bonaparte.) (Longirostris S. D. Wood
(1836 in ornithology, not involved.)

Usa Whitley, Records Austral. Mus.,
vol. 15, no. 5, p. 299, April 6, 1927.
(Type Scomber cordylavides
Menschikov, monotypic.)

Diplodus nigrofasciatus (not REGAN) FOWLER, Proc. Acad. Nat. Sci. Philadelphia, 1925, p. 234 (Delagoa Bay).

Sparus robinsoni (not GILCHRIST and THOMPSON) FOWLER, Proc. Acad. Nat. Sci. Philadelphia, 1925, p. 236 (Natal coast).

Depth $2\frac{1}{8}$ to $2\frac{1}{2}$; head 3 to $3\frac{1}{2}$, width $1\frac{7}{8}$ to 2. Snout $2\frac{1}{4}$ to $2\frac{2}{3}$ in head; eye $3\frac{1}{6}$ to $4\frac{1}{2}$, $1\frac{7}{8}$ to $2\frac{1}{5}$ in snout, $1\frac{1}{6}$ to $1\frac{4}{5}$ in interorbital; maxillary to eye in young, $\frac{1}{2}$ in eye with age, expansion $1\frac{1}{2}$ to $2\frac{1}{5}$ in eye, length $2\frac{2}{5}$ to $2\frac{3}{5}$ in head; 6 front incisors in each jaw, sometimes 8 below; upper molars triserial, lower biserial; interorbital $2\frac{3}{4}$ to 3 in head, broadly convex. Gill rakers 7 + 10, lanceolate, $2\frac{2}{3}$ in gill filaments, which $1\frac{2}{5}$ in eye.

Scales 53 to 57 in lateral line to caudal base and 2 to 10 more on latter, 5 to 8 above, 12 to 14 below, 21 to 30 predorsal forward opposite eye center, 5 or 6 rows across cheek to preopercle ridge. Scales with 13 to 15 basal radiating striae; 40 obsolete apical points with 2 or 3 transverse rows of basal elements; circuli fine.

D. XI, 12, I or 13, I, fourth spine $1\frac{9}{10}$ to 2 in head, first ray $2\frac{1}{2}$ to $2\frac{4}{5}$; A. III, 11, I or 12, I, second spine $2\frac{1}{4}$ to $3\frac{1}{4}$, first ray $2\frac{1}{3}$ to $3\frac{1}{3}$; caudal 1 to $1\frac{1}{5}$, well forked; least depth of caudal peduncle $2\frac{1}{2}$ to $2\frac{3}{4}$; ventral $1\frac{1}{4}$ to $1\frac{2}{5}$; pectoral $2\frac{1}{3}$ to $3\frac{1}{4}$ in combined head and body to caudal base.

Back pale olivaceous to brownish, sides and under surface white, everywhere with bright silvery-white reflections, brassy in alcohol specimens.

Each row of scales on back and upper sides often showing dark longitudinal band median on each scale row. Iris white with silvery, often neutral shade above. Dorsal pale or grayish, membranes brownish terminally. Caudal grayish, hind edge dusky. Other fins all pale or whitish.

Red Sea, Arabia, Portuguese East Africa, Zululand, Natal, Cape Colony, Madagascar, Mauritius, India, Ceylon, Philippines, China, Formosa, Japan, Queensland, New South Wales.

Zamora Whitley, Rec. Austral. Mus.,
vol. 18, no. 3, p. 108, March 25, 1931.
(Type Caranx hellianus McCulloch,
orthotypic.)

Body ovate or oblong, compressed, back sometimes well elevated or little arched. Head moderate to large, more or less compressed. Snout variably conic to convex. Eye large. Adipose eyelids usually well developed. Mouth moderate or large, oblique. Maxillary broad. Supplemental maxillary well developed. Teeth unequal, in one or few rows, not in villiform bands. Teeth usually villiform on vomer, palatines and tongue, wanting or deciduous in some forms. Preopercle entire in adult, serrate in young, usually with membranous border. Gill rakers long. Scales present, mostly very small. Lateral line with hind portion armed with strong bony plates, becoming larger on

Follow—Incl Caps
Leaded

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134789 108

tail
D. X, 9 (X, 10 on figure), fourth spine $2\frac{2}{5}$ in head, seventh ray $2\frac{1}{10}$; A. III, 8, second spine 3, first ray $2\frac{3}{4}$; caudal $1\frac{1}{10}$, very slightly emarginate behind; least depth of caudal peduncle $2\frac{2}{3}$; pectoral $1\frac{1}{10}$; ventral $1\frac{3}{5}$.

Body ornamented by spots of golden forming well-marked longitudinal series. As shown on figure apparently as slightly dark spot to each scale. (Sauvage.)

Seychelles. Valenciennes gives his type secured by Dussumier, as 125 mm. He says the body is greenish, membranous border of opercle orange. Dorsal and anal gray. Caudal deep green. Paired fins golden. No spots on cheek.

Lethrinus xanthochilus Klunzinger *1179*

type locality
18 Lethrinus xanthochilus KLUNZINGER, Verh. zool. bot. Ges. Wien, vol. 20, 1870, p. 753. *10* ~~Koseir~~, Red Sea; Fische Roth. Meer., 1884, p. 39, pl. 6, fig. 3 (type).

1st. page
Depth $3\frac{3}{5}$; head $3\frac{1}{5}$, upper profile inclined, little arched over eye. Snout $1\frac{3}{5}$ in head from snout tip; eye $6\frac{1}{5}$, 4 in snout, 3 in suborbital depth to maxillary expansion; maxillary reaches half way to eye, length $2\frac{2}{5}$ in head from snout tip; teeth all conic, 4 canines in front of each jaw, inner band of fine villiform teeth behind canines; interorbital low.

Scales 48 (52 tubular scales on figure); 5 above, 12 below, predorsal forward not quite opposite hind preopercle edge; no postocular scale on figure.

caudal peduncle, each plate furnished with a spine. Short dorsal branch of lateral line usually present. Dorsal spines rather low, joined, both fins depressible in groove. Second dorsal long, usually elevated in front. Anal like second dorsal, nearly as long, preceded by two rather strong spines, base longer than abdomen. Caudal strongly forked. Caudal peduncle very slender. Pectoral falcate. Ventral moderate.

Fishes found in all warm seas, generally brilliant silvery white or with yellow in fins. Some of large size and valued as food and their game qualities. The species are numerous and often difficult to distinguish.

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Black-brown band above middle of forehead and second from front eye edge over middle of snout length. Back clear gold/brown. Three blue-violet bands parallel and above lateral line, uppermost to end of soft dorsal and others to caudal base. Below lateral line each scale row with longitudinal brown line. Length not given; drawing 70 mm. (Steindachner.)

Zanzibar, Madagascar, Persian Gulf. Said to differ from Lethrinus croceopterus Valenciennes by the small eye and more elevated body. It is suggestive of Lethrinus haematopterus except the back anteriorly is not so elevated. The figure by Sauvage seems to agree except the soft anal is lower and the predorsal scales extend forward opposite hind eye edge. This specimen was 270 mm. long.

Lethrinus croceopterus Valenciennes

Lethrinus croceopterus VALENCIENNES, Hist. Nat. Poiss., vol. 6, 1830, p. 302, (Seychelles). SAUVAGE, Hist. Nat. Madagascar, Poiss., 1891, p. 204, pl. 24, figs. 1-1a (type).

Depth $2\frac{4}{5}$; head $3\frac{1}{5}$, upper profile very shallowly convex. Snout $2\frac{1}{10}$ in head; eye $3\frac{1}{2}$, $1\frac{3}{5}$ in snout, slightly impinging on upper profile, greater than interorbital; maxillary reaches $\frac{1}{4}$ to eye, length 3 in head; canines very strong (apparently 4 intended in front of each jaw on figure); hind teeth elliptical; interorbital very low.

Scales 46 in lateral line (43 on figure); 5 above, 14 below; predorsal scales extend forward not quite to eye; (postocular scales above preopercle not clearly shown on figure).

The following a doubtful species:

Caranx janthinospilos Bleeker

Caranx janthinospilos Bleeker, Act.
Ned. Soc. Ind. Neerl. (Amboina),
vol. 1, p. 45, 1856 (type locality,
Amboina).

Caranx (Caranx) janthinospilos
Weber and Beaufort, Fishes Indo
Austral. Archipel., vol. 6, p. 259,
1931 (copied).

Carangus janthinospilos Bleeker,
Ned. Tyds. Dierk., vol. 1, p. 270, 1863
(reference).

2688
15 examples. Basa Reef, Gulf of
Boni, Celebes. December 17, 1909.
Length 19 to 37 mm.

24081. Labuandata Bay, Gulf of
Boni, Celebes. February 21, 1908.
Length 42 mm.

24097. Great Tobea Island, Buton
Strait. December 15, 1909. Length 47
mm.

Depth $3\frac{2}{3}$ to $3\frac{3}{4}$; head $4\frac{2}{3}$, front profile strongly declivous. Eye 5 in head, more than half diameter from upper profile of head; jaws equal, upper ends below front part of eye, length $2\frac{2}{3}$ in head; upper teeth with outer series conic, of which 12 anterior much longer; lower teeth conic, subequal, anterior minute canines; besides vomerine and palatine teeth patches of minute teeth on mucose palatine membrane; tongue with median band of teeth, besides ^{patches of} minute teeth.

Scales very conspicuous, over 100 in longitudinal line. Lateral line arched to $\frac{1}{5}$ in soft dorsal, straight section with 30 scutes, depth 9 in body depth.

D. I, VIII — I, 23 or 24, spinous fin much lower than soft fin; A. II — I, 19 or 20, like soft dorsal

emarginate, anteriorly acute, less than twice lower than body; caudal lobes acute, about 5 in body; pectoral much longer than head, falcate, reaches fifth or sixth anal ray; ventral more than twice shorter than head, acute.

Iridescent greenish above, yellowish silvery below. Head, back and sides with small, oblong and rounded spots, widely dispersed, deep violet. Spinous dorsal light hyaline violet. Soft dorsal, anal and caudal light violet anteriorly, with darker margin. Pectoral clear yellowish. Ventral yellowish, anteriorly light violet. Length 449 mm. (Weber and Beaufort.)

East Indies.

Analysis of Species

- a! Arch of lateral line reaches at least until opposite soft dorsal origin.
- b! Last dorsal and anal rays not subdivided from others.
- c! Breast entirely scaly.
- d! Dorsal rays 19 to 22, anal 15 to 17. sexfasciatus.
- d² Dorsal rays 23 to 25, anal 18 to 20.
- e! Scutes 36 to 38; color uniform. melampygus.
- e² Scutes 30 to 35; with irregular dark spots, increasing in number and size with age. stellatus.
- f² Breast laterally more or less naked, ventrally naked, only small median patch of minute scales before ventrals.
- f! Mouth cleft begins opposite lower third of eye; dorsal rays 20 to 22, anal 16 to 18; scutes

33 to 37.

xanthopygus.

1469

f.² Mouth cleft begins opposite lower eye edge or below level of eye.

g.¹ Scutes 36; dorsal rays 22 or 23, anal 18. sansun.

g.² Scutes 28 to 30; dorsal rays 19 to 20, anal 16 or 17. ignobilis.

b.² Last dorsal and anal rays little larger than those preceding and partly free. corylaoides guara.

a.² Arch of lateral line reaches only far as middle of spinous dorsal; breast entirely naked before line between pectorals and ventrals. bucculentus.

Caranx sexfasciatus Duoy and Gaimard

Caranx sexfasciatus Duoy and Gaimard,
 Voy. Uranie, Zool., p. 358, pl. 65,
 fig. 4, 1825 (type locality, "Iles
 des Papous"). — Cuvier, Hist. Nat.
 Poiss., vol. 9, p. 83, 1833 (Waigiu;
 Vanicolo; Batavia). — Bleeker,
 Nat. Geneesk. Arch. Ned. Indie,
 vol. 2, p. 517, 1845 (Batavia).

Sauvage, Hist. Madagascar, Poiss.,
 p. 327

Labrus carutta Lacépède, Hist. Nat. Poiss.,
vol. 3, 1802, p. 447 (description in key).
Corvina carutta Cuvier, Hist. Nat. Poiss.,
vol. 5, 1830, p. 124 (Pondichery; Malabar).
^L_m Günther, Cat. Fishes Brit. Mus., vol. 2,
1860, p. 302 (Sea of Tinian). — Day, Fishes
of Malabar, 1865, p. 51. ¹/₂ Karoli, Termesz.
Füzetek, Budapest, vol. 5, 1881, p. 159
(Canton).

Sciaena carutta Day, Fishes of India, pt. 2,
1876, p. 192, pl. 44, fig. 1 (Madras); Fauna
British India, ^{Fishes} vol. 2, 1889, p. 122. ¹/_m Tirant,
Service Océanogr. Péch. Indo Chine, ~~1929~~,
6^e note ¹⁹²⁹, p. 169 (Cochin China).

Corvina carouna Cuvier, Hist. Nat. Poiss.,
vol. 5, 1830, p. 125. Malabar.

— Seale, Occas. Pap. Bishop
 Mus., vol. 1, no. 3, p. 74, 1900 (1901)
 — Jordan and Evermann, Proc. U. S. Nat. Mus., vol. 25, p. 337, 1902.
 (Guam). — Jordan and Seale,
 Bull. Bur. Fisher., vol. 25, p.
 231, 1905 (1906) (Gaasegase River
 at Apia; Vailele, Upolu); vol.
 26, p. 14, 1906 (1907) (Cavite). —
Evermann and Seale, Bull. Bur.
 Fisher., vol. 26, p. 65, 1906 (1907)
 (San Fabian). — Seale and Bean,
 Proc. U. S. Nat. Mus., vol. 33, p. 241,
 1907 (Zamboanga).

— Seale, Philippine Journ. Sci.,
 vol. 5, p. 270, 1910.

Johnius carutta Block Pne 129

Johnius carutta Block, Naturgesch.

Ausland. Fische, vol. 7, 1793, p. 133, pl. 356.

Tranquebar. $\frac{1}{m}$ Schneider, Syst. Ichth.

Block, 1801, p. 74 (Tranquebar). $\frac{1}{m}$ Cantor,

Journ. Asiatic Soc. Bengal, vol. 18, pt. 2,

1849, p. 1048 (Pinang). $\frac{1}{m}$ Bleeker, Verhandl.

Kon. Akad. Wetensch. Amsterdam, series 3,

vol. 14, 1874, p. 48 (compiled) $\frac{1}{m \frac{1}{2}}$ Jordan and

Starks, Ann. Carnegie Mus., vol. 11, nos. 3-4,

November 5, 1917, p. 453 (Ceylon). $\frac{1}{m}$ Fowler,

Journ. Bombay Nat. Hist. Soc., vol. 30, ^{No. 4} no.

1926, p. 10 (Bombay); Proc. Acad. Nat. Sci.

Philadelphia, 1929 (1930), p. 596 (Shanghai),

p. 611 (Hong Kong).

- Evermann and Seale, Copeia, no. 119, p. 70, June 16, 1923 (Apia, Samoa).
- Waksya, Ann. Carnegie Mus., vol. 15, p. 184, pl. 25, figs. 3-4, 1924 (Tokyo Bay; Kii; Uragina; Ryukyu; Bonin Islands; Formosa).
- Fowler, Bull. Bishop Mus., no. 22, pp. 25, 32, 1925 (Honolulu; Samoa).
- Fowler and Ball, Bull. Bishop Mus., no. 26, p. 12, 1925 (Laysan).
- Fowler, Bull. Bishop Mus., no. 38, p. 12, 1927 (Washington, Christmas and Baker Islands); Journ. Bombay Nat. Hist. Soc., vol. 32, no. 4, p. 707, May 31, 1928 (Ceylon); vol. 33, no. 1, p. 110, September 30, 1928 (Bombay); Mem. Bishop Mus., vol. 10, p. 149, 1928 (Fiji; Tahiti; Sulu; Hanalei; Hawaii; Gilberts; Marshalls; Apia; Tari Tari; Funafuti; Laie Stream; Guam; Tahiti; Strong Island; Funafuti; Waikiki); vol. 11, no. 5, p. 326, 1931 (Honolulu); vol. 11, no. 6,

Silvery, everywhere so clouded with
brown dots as to quite obscure
ground color. Vertical fins darker
than body, except dull blue base of
spinous dorsal. Length 285 mm. (Agilby).
New South Wales, Queensland.

p. 404, 1934 (Port Moresby; Teterru,
Solomons; Samoa; Ontang Java;
Hawaiian Islands); Proc. Acad.
Nat. Sci. Philadelphia, vol. 86,
1934, p. 77 (Savoer, Bali), p.
444 (Durban, Natal); vol. 87, p.
140, 1935 (Bangkok; Sriracha; Paknam).

Depth $3\frac{1}{3}$; head $3\frac{1}{4}$ to $3\frac{1}{2}$, width $1\frac{3}{5}$ to $1\frac{3}{4}$. Snout $3\frac{1}{4}$ in head; eye $4\frac{1}{3}$ to $4\frac{2}{5}$, $1\frac{1}{4}$ in snout, $1\frac{1}{5}$ in interorbital; maxillary reaches $\frac{1}{2}$ in eye, length $2\frac{1}{4}$ in head; teeth in narrow bands, villiform, outer upper row enlarged; interorbital $3\frac{2}{3}$ in head, broadly convex; preopercle with narrow crenulated membranous border. Gill rakers $5+10$, short, spinulose, $\frac{1}{6}$ of eye.

Scales 55 to 58 along above lateral line to caudal base; tubes 46 to 48 in lateral line to caudal base; 7 above, 14 or 15 below; vertical fins nearly scaly to tips.

D. X, I, 28 or 29, second spine $1\frac{2}{5}$ in head, first ray 3; A. II, 7, second spine 3 or $1\frac{3}{5}$ in postocular, second ray $2\frac{1}{5}$ in head; caudal $1\frac{2}{3}$, rather broadly convex behind; least depth of caudal peduncle $2\frac{4}{5}$; pectoral $1\frac{4}{5}$; ventral $1\frac{1}{3}$, first ray ends in short filament.

Caranx (Caranx) sexfasciatus
Weber and Beaufort, Fishes Indo-
Austral. Archip., vol. 6, p. 243,
 1931 (Sabang; Nias; Batavia;
 Pandjok Priok; Lombok; Sumbawa;
 Flores; Timor; Aru; Balispapan;
 Kota Bharu; Macassar; Saleyer;
 Butan; Siau; Ambon; Cram; Waigiu;
 Beira).

Selar sexfasciatus Oshima, Philippine
Journ. Sci., vol. 26, No. 3, p. 382, March
 1925 (compiled).

Cope 129

Johnius novae-hollandiae (Steindachner)
Sciaena (Corvina) novae-hollandiae

Steindachner, Sitz. Ber. Akad. Wiss. Wien,
math.-naturw. Klasse, vol. 53, pt. 1,
1866, p. 445, pl. 5, fig. 2. Port Jackson.

Sciaena novae-hollandiae Gilby, Mem.
Queensland Mus., vol. 6, December 19, 1918,
p. 79, pl. 23 (types of Corvina comes and
Pseudomycterus maccullochi).

Johnius novae-hollandiae Bleeker,
Verhandel. Kon. Akad. Wetensch. Amsterdam,
series 3, vol. 14, 1874, p. 41 (Sumatra;
Borneo); Atlas Ichth. Ind. Néerland.,
vol. 9, 1877, pl. (2) 387, fig. 1.

Corvina comes De Vis, Proc. Linn. Soc. New
South Wales, vol. 9, 1884, p. 538. Brisbane
River, South Queensland.

Pseudomycterus maccullochi Gilby, Proc.
Royal Soc. Queensland, ^{vol.} 21, 1908, p. 96. Logan
River, South Queensland.

Scomber heberi Bennett, Fishes
of Ceylon, pl. 26, 1830 (type
locality, Ceylon).

Caranx heberi Bleeker, Verh.
Batavia. Genoot. (hal. Ichth.
Bengal), vol. 25, p. 44, 1853
(reference).

Cuvier, Hist. nat. Poiss., vol. 9, p. 119,
1833 (on Bennett).

15-24

(compiled). ^{1/2} Day; Fishes of Malabar,
1865, p. 55 (compiled).

Johnius caitor (not Cuvier) Bleeker,
Nat. Geneesk. Arch. Nederl. Indie.
(Typog. Batavia), vol. 2, 1845, p. 523
(Batavia).

Depth $3\frac{2}{5}$ to $3\frac{1}{2}$; head $3\frac{1}{3}$ to $3\frac{4}{5}$,
width $1\frac{4}{5}$ to 2. Snout $3\frac{1}{4}$ to $3\frac{1}{2}$ in head;
eye $3\frac{4}{5}$ to $4\frac{1}{8}$, $1\frac{1}{4}$ to $1\frac{1}{2}$ in snout,
equals interorbital; maxillary reaches
opposite eye center, expansion $2\frac{1}{5}$ in
eye, length 3 to $3\frac{1}{10}$ in head; chin
with 5 pores; outer row of upper teeth
slightly enlarged, lower ^{teeth} uniform;
interorbital $3\frac{4}{5}$ to $4\frac{1}{8}$, broadly
convex; preopercle edge flexibly serrate.

Caranx lessonii (Cuvier) Lesson,
Voy. Cochin, Zool., vol. 2, pt. 1, p.
155, pl. 31, fig. 1, 1830 (type locality,
New Guinea). — Cuvier, Hist. nat.
Poiss., 9, p. 113, 1833 (Malabar).
— Bleeker, Verh. Batavia. Genoot.
(nat. Ichth. Bengal), vol. 25, p. 44,
1853 (reference).

Caranx lessonii Waksija, Ann. Carnegie
Mus., vol. 15, p. 188, pl. 25, fig. 2,
1924 (Formosa).

Brown above, below whitish.
Spinous dorsal, anal and ventral
more or less blackish terminally,
other vertical fins dusky terminally.
Pectoral pale brown. Iris slate.

Natal, India, Andamans, Malayan
Peninsula, East Indies, Philippines.

52983 and 52984 A. N. S. P. Bombay, India.
Prof. F. Hallberg. Length 102 to 114 mm.
1924. Purchased.

Caranx sem Cuvier, Hist. Nat.
Poiss., vol. 9, p. 105, 1833 (type
locality, Pondicherry). — Jerdon,
Madras Journ. Lit. Sci., p. 137, 1851.
— Bleeker, Verh. Batavia. Genoot.
(Nat. Ichth. Bengal), vol. 25, p. 44, 1853
(reference).

— Fowler, Journ. Acad. Nat. Sci.
Philadelphia, ser. 2, vol. 12, p. 512,
pl. 15, upper figure to left, June 10,
1904 (Padang); Proc. Acad. Nat.
Sci. Philadelphia, p. 79, Jan.
1905 (Padang material).

Gill rakers $4+9$, short, lanceolate,
half of gill filaments, which $2\frac{2}{5}$ in
eye.

Scales 43 to 47 in lateral line to
caudal base, 6 or 7 above, 8 or 9 below,
 23 or 24 predorsal. Scales with 7 to 10
basal radiating striae; 31 to 37 apical
denticles, with 2 or 3 transverse series
of basal elements; circuli fine.

D. IX or X, 29, I or 30, I, third spine
 $1\frac{3}{4}$ to 2 in head, first ray $2\frac{3}{5}$ to $2\frac{2}{3}$;
A. II, 8, I or 9, I, second spine $2\frac{1}{8}$ to $2\frac{1}{4}$,
second ray $1\frac{1}{2}$ to $1\frac{3}{5}$; caudal 1 , cuneate,
ends in median point; least depth of
caudal peduncle $3\frac{1}{5}$ to $3\frac{1}{4}$; pectoral
 $1\frac{1}{5}$ to $1\frac{1}{3}$; ventral $1\frac{1}{8}$ to $1\frac{1}{5}$, first ray
ends in filament.

Caranx forsteri Cuvier, Hist. Nat.

Poiss., vol. 9, p. 107, 1833 (type locality, Mauritius; Malabar; Celebes; New Guinea; New Ireland; Vanicolo; East Indies)

— Richardson, Ann. Mag. Nat. Hist., vol. 11, p. 28, 1843.

— Cantor, Journ. Asiatic Soc. Bengal, vol. 18, pt. 2, p. 1109, 1849 (1850) (Pinang Sea).

~~(1517) same as~~
Scales 65 above along lateral line,
58 along below lateral line; 45 to 48
in lateral line to caudal base; 8 above,
16 below; scales ctenoid, except on
cheeks.

D. X, I, 23 or 24, third to seventh
spines longest and equal half body depth;
A. II, 7, second spine $\frac{2}{3}$ first ray or $\frac{1}{3}$
body depth; caudal cuneate in young,
more obtuse with age; pectoral equals
head without snout; ventral reaches
half way to vent, outer ray prolonged.

Silvery gray, abdomen whitish. Cheeks
tinged golden. Black bands, sometimes
interrupted, extend over back; first
from nape passes back and down, ends
shortly below lateral line; second begins
opposite fifth to seventh dorsal spines,
passes back and down to end opposite
middle of ventral; third arises opposite

— Bleeker, Nat. Tijds. Ned. Indië,
vol. 2, p. 210, 1851 (Boeloekomba);
vol. 3, p. (161) 164, 1852 (Timor
Kupang; Padang), p. 235 (Amboina),
p. 409 (Pamangkajene), p. 546
(Amboina), p. 741 (Kema, Celebes);
vol. 4, p. 92, 1853 (Amboina);
vol. 5, p. 154, 1853 (Macassar), pps.
319, 320 (Amboina), p. 428 (Sambas,
Borneo), p. 544 (Meauwen Bay,
Java); Verh. Batavia. Genoot.
(Nat. Ichth. Bengal), vol. 25,
p. 44, 1853 (reference); Nat. Tijds.
Ned. Indië, vol. 6, p. 51, 1854
(Singangole), p. 90 (Banda Neira),

Cuv 179

Johnius belangerii (Cuvier)

Corvina belangerii Corvina, Hist. nat.

Poiss., vol. 5, 1830, p. 120. Malabar.

Corvina belangerii Valenciennes, Voyage

Ind. Orient. Bélanger, Zool., 1834, p. 357

(East Indies). $\frac{1}{m}$ Günther, Cat. Fishes Brit.

Mus., vol. 2, 1860, p. 303 (Sea of Pinang). $\frac{1}{m}$

Day, Fishes of Malabar, 1865, p. 54. $\frac{1}{m}$ Elera,

Cat. Fauna Filipinas, vol. 1, 1895, p. 502

(Luzon, Santa Cruz, Cavite).

Corvina belangerii Day, Proc. Zool. Soc. London,

1870, p. 684 (Andamans).

Sciaena (Corvina) belangerii Steindachner,

Verhandel. zool. bot. Gesell. Wien, vol. 16,

1866, p. 771 (Calcutta).

Sciaena belangerii Day, Fishes of India,

pt. 2, 1876, p. 191, pl. 44, fig. 5 (India,

p. 204 (Timor Kupang), p. 457
 (Amboina), p. 518 (Kobor Island);
 vol. 7, p. 38, 1854 (Kobor Island),
 p. 226 (Macassar), p. 228 (Manado),
 p. 312 (Tjiringin, Perdana), p. 361
 (Batjan); vol. 8, p. 296, 1855
 (Ternate), p. 345 (Tikol, Sumatra),
 p. 393 (Amboina), p. 437
 (Bonthaian, Celebes); vol. 9, p. 114,
 1855 (Sumbawa), p. 192 (Batjan),
 p. 282 (Macassar), p. 492 (Batjan),
 p. 493 (Amasing and Madawang
 Rivers, Batjan); vol. 11, p. 253,
 1856 (Laboeha, Batjan), p. 385
 (Kajeli, Buru), p. 419 (Muntok,
 Java); vol. 12, p. 193, 1856 (Ternate),
 p. 214 (Nias), p. 293 (Boeling, Bali);
 Act. Soc. Sci. Ind. Neerl., vol. 1, no.
 3, p. 4, 1856 (Manado), p. 9 (Macassar),
 p. 31 (Manado); vol. 1, no. 5, p. 6, 1856

scaled basally, also base $\frac{2}{3}$ of caudal.

D. 8, I, 31, third spine $1\frac{4}{5}$ in head, fifteenth ray $2\frac{3}{4}$; A. II, 7, second spine strong, 2 in head, subequal with first ray; caudal $1\frac{2}{5}$, cuneate; least depth of caudal peduncle $3\frac{1}{8}$; pectoral $1\frac{3}{5}$; ventral $1\frac{2}{3}$.

Silvery, darkest above, sides and belly deeply washed with gold, also ventral base, preopercle edge and exposed maxillary. Spinous dorsal dark edged, interspinous membrane powdered rufous brown. Powdering of soft dorsal and caudal confined to stripe along each ray. Length 211 mm. (Gillby.)

Northern Australia.

(Amboina); vol. 2, no. 7, p. 5, 1857
(Amboina); hat. Tijds. ned. Indie,
vol. 13, p. 372, 1857 (Sangi), p.
384 (Batjan), p. 388 (Timor Deli),
p. 478 (Karangbolleu, Java);
Act. Soc. Sci. Ind. neerl., vol. 3,
no. 4, p. 3, 1857-58 (Manado); vol.
3, no. 5, p. 2, 1857-58 (Macasser);
vol. 3, no. 9, p. 2, 1857-58 (Padang);
hat. Tijds. ned. Indie, vol. 15,
p. 200, 1858 (Goram); vol. 16, p. 29,
1858 (Amboina), p. 196 (Sinka-
wang), p. 434 (Pamangkhat);
vol. 17, 1858-59, p. 142 (Boeleling,
Bali); Act. Soc. Sci. Ind. neerl.,
vol. 5, no. 7, p. 2, 1858-59 (Sinka-
wang, Borneo); vol. 5, no. 8, p. 2,
1858-59 (Tobariri, Celebes);
(Sumatra), vol. 8, p. 12, 1859
(Benculen); hat. Tijds. ned.

Case 29

Johnius leptolepis (Agilby)

Sciaena leptolepis Agilby, Mem. Queensland Mus., vol. 6, December 19, 1918, p. 87, pl. 25.

Coker Island, Northern Territory, Australia.

Depth $3\frac{2}{5}$; head $3\frac{1}{5}$, width $2\frac{1}{5}$.

Snout 4 in head; eye $4\frac{3}{4}$, $1\frac{1}{3}$ in snout, greater than interorbital; maxillary reaches $\frac{3}{5}$ in eye, length $2\frac{2}{5}$ in head, jaws equal; upper teeth uniserial, conic, lower with similar series of conic teeth behind which second series anteriorly in jaw; interorbital 6 in head, narrow, convex; preopercle finely crenulate, with few small widely separated spines at angle. Gill rakers $6+10$, and some rudiments; short, slender, $\frac{2}{5}$ of eye.

Scales 82 along above lateral line to caudal base (figure shows 51 tubular scales in lateral line to caudal peduncle); 11 above, 19 below; soft dorsal finely

Indie, vol. 20, p. 141, 1859-60
 (Badjoa, Bali); hat. Tijds.
 Ned. Indie, vol. 22, p. 239, 1860
 (Bali); Verslag. Kon. Akad.
 Wet. Amsterdam, vol. 12, p. 31,
 1861 (Singapore); Ned. Tijds.
 Dierk., vol. 1, p. 152, 1863
 (Batjan).

— Kner, Reise Novara, Fische, p. 158,
 1868 (Java; Madras). — Jouan,
 Mém. Soc. Sci. Nat. Cherbourg, vol.
 14, p. 298, 1868.

— Sauvage, Hist. Madagascar, Paris,
 p. 329, pl. 31, fig. 3, 1891 (type; type
 of C. belangeri), p. 518 (reference).

15-18
second and third dorsal rays or
between two dorsal fins, passes down
parallel to second band; fourth begins
below center of second dorsal and
descends to lateral line; fifth
follows same course below last few
dorsal rays; sometimes sixth over
free part of tail. Upper $\frac{2}{3}$ of first
dorsal stained black, indistinct with
age. Caudal slightly tinged with black,
other fins yellowish. Reaches 305 mm.
(Day.)

India, Pinang.

Caranx forsteri Cuvier, Hist. nat.
Pois., vol. 9, p. 107, 1833 (type
locality, Mauritius; Malabar;
Celebes; New Guinea; New
Ireland; Vanicolo; East Indies).
— Jordan and Seale, Proc. U. S.
Nat. Mus., vol. 28, (1905) p. 775,
(Negros). — Seale, Occas. Pap.
Bishop Mus., vol. 4, no. 1, p. 30,
1906 (Tahiti). — Steindachner,
Sitzb. Ber. Akad. Wiss. Wien,
math.-naturw. Kl., vol. 115, pt. 1,
p. 1403, 1906 (Upolu). —
Jordan and Seale, Bull. Bur.
Fisher., vol. 25, p. 230, 1905
(1906) (Pago Pago; Apia); vol.

vol. 4, 1874, p. 110 (China); Verhandel.
Kon. Akad. Wetensch. Amsterdam,
series 3, vol. 14, 1874, p. 46 (Sumatra, Nias,
Pinang, Singapore, Banka, Java, Borneo,
Philippines); Atlas Ichth. Ind. Néerland,
vol. 9, 1877, pl. (4) 387, fig. 1.

Johnius belangeri Kner, Reise Novara,
Fische, 1866, p. 133 (Java; Manila). $\frac{1}{m}$

Fowler, Journ. Bombay Nat. Hist. Soc.,
vol. 32, no. 2, October 20, 1927, p. 260 (Bombay);
Mem. Bishop Mus., vol. 10, 1928, p. 235
(on Day).

Corvina kuhlii Cuvier, Hist. Nat. Poiss.,
vol. 5, 1830, p. 121. Labouane River, Java.

Corvina lobata Cuvier, ^{Nist. Nat. Poiss.} ~~op. cit.~~, vol. 5,
1830, p. 122, pl. 107. Malabar. $\frac{1}{m}$ Günther,
Cat. Fishes Brit. Mus., vol. 2, 1860, p. 304

26, p. 13, 1906 (1907) (Cavite). —
Jordan and Dickerson, Proc. U. S.
 Nat. Mus., vol. 34, p. 610, 1908
 (Suva). — Jordan and Richardson,
 Bull. Bur. Fisher., vol. 27, p. 250,
 1907 (1908) (Lubang; Manila;
^{Mem. Carnegie Mus., vol. 4, no. 7, p. 179, 1909 (Keelung).}
 Iloilo; Cagayan Cello); — Kendall
 and Goldsborough, Mem. Mus.
 Comp. Zool., vol. 26, p. 268, 1911
 (Taritari; Funafuti; Marshalls).
 — Snyder, Proc. U. S. Nat. Mus.,
 vol. 42, (1912) p. 496, (Okinawa).
 — Bean and Weed, Proc. U. S. Nat.
 Mus., vol. 42, p. 598, 1912 (Batavia).
 — Weber, Siboga Exped., vol. 57,
 Fische, p. 395, 1913 (Lombok; Sand-
 boden; Bima; Flores; Macassar;
 Siau; Saleyer; Banda Sea).

Bombay). ¹/_m Johnstone, Fasc. Malayensis,
Annandale and Robinson, Zool. 2, 1903,
p. 293 (Patani and Jhering coasts). ¹/_m
Weber, Nova Guinea, vol. 9, pt. 3, 1913, p.
588 (Lorentz River, Uren River, Vermowai
River). ¹/_m Horman, Ann. Mag. Nat. Hist.
London, series 9, vol. 9, 1922, p. 321(
¹/_m Barnard, Ann. South African Mus., vol.
21, pt. 2, 1927, p. 572 (Katal coast).
Sciaena belangeri Day, Fauna British
India, vol. 2, 1889, p. 120. ¹/_m Reyan, Trans.
Zool. Soc. London, vol. 20, pt. 6, 1914, p. 276
(Mimika River, New Guinea).
Johnius belangeri Cantor, Journ. Asiatic
Soc. Bengal, vol. 18, pt. 2, 1849, p. 1047
(Pinang, Malayan Peninsula, Singapore).
¹/_m Bleeker, Nederland. Tijdschr. Dierk.,

— Oshima, Philippine Journ. Sci.,
vol. 28, no. 3, p. 377, March 3, 1925
(Keelung; Toko; Tainan; Yilan).

— Barnard, Ann. South African Mus.,
vol. 21, pt. 2, p. 543, Oct. 1927 (Katal;
Zululand; Delagoa Bay).

— McCulloch, Austral. Mus. Mem.,
no. 5, pt. 2, p. 188, Sep. 10, 1929 (reference).

29 examples. Cataingan Bay, Masbate.
April 17, 1908. Length 67 to 104 mm.
Male with buccal ova.

16852, 23988, 23989. Cataingan Bay.
April 18, 1908. Length 76 to 94 mm.

16099, 16100, 16107. Cataingan Bay.
May 14, 1909. Length 78 to 101 mm.

23196 to 23202. Catbalogan, Samar.

Depth 2.15; head 5.15. Snout $2\frac{1}{5}$
in head; eye $4\frac{2}{3}$, $2\frac{1}{5}$ in snout;
maxillary reaches opposite eye, length
 $2\frac{2}{3}$ in head; jaws equal; teeth
tridentate in outer row and broad
band of finer inner ones; interorbital
low; preopercle edge denticulate.

Scales about 116 in lateral line.
Cheek with small irregular scales to
preopercle ridge, flange apparently

1486

Selar forsteri Bleeker, Verhand.
Batavia. Genoot. (makreel.), vol.
24, p. 57, 1852 (Batavia; Padang).

Carangus forsteri Bleeker, Ned.
Tijds. Dierk., vol. 1, p. 240, 1863
(Albi), p. 270 (Atapupu, Timor);
vol. 2, p. 31, 1865 (Manila Bay).
— Jordan and Evermann, Bull. U.
S. Fish Comm., vol. 23, pt. 1, p. 191,
1903 (1905) (Honolulu; Hilo;
Waialua; Hanalei and Puako Bays).

Trichopterus forsteri Jordan and
Starks, Ann. Carnegie Mus., vol. 11,
p. 442, 1917 (Ceylon).

vol. 26, bundle, 1913, p. 12 (Meekran).

Johnius cantori Bleeker, Verhandel. Kon.
Akad. Wetensch. Amsterdam, series 3,
vol. 14, 1874, p. 51 (on Cantor).

Depth $3\frac{1}{2}$ to 4 in total; head $3\frac{1}{2}$ to $3\frac{2}{3}$,
width 2. Eye $4\frac{1}{4}$ to 5 in head, $1\frac{1}{4}$ in snout,
1 in interorbital; lower jaw shorter than
upper, overhung by snout; maxillary
reaches $\frac{1}{2}$ to $\frac{2}{3}$ in eye; transverse row
of 4 pores across snout, free edge of skin
with 5 pores and lateral lobe; central
pore below, mandibular symphysis
with 2 more either side; teeth villiform,
upper with outer row of conical curved
ones most developed near median line;
lower teeth in several rows above symphysis,
laterally inner row of enlarged curved
teeth; Preopercle with 6 wide set rather
strong denticles at angle, lower edge
crenulate in young.

Caranx peronii Cuvier, Hist. nat.
Pois., vol. 9, p. 112, 1833 (type locality,
Vanicolo; Amboina; Java; Malabar;
East Indies). — Bleeker, Verh.
Batavia, Genoot. (hal. Ichth.
Bengal), vol. 25, p. 44, 1853
(reference).

Cuv 129

1575

Johnius maculatus Schneider

Johnius maculatus Schneider, Syst.

Ichth. Bloch, 1801, p. 75. Tringubar. $\frac{1}{m}$

Cantor, Journ. Asiatic Soc. Bengal, vol.

18, pt. 2, 1849, p. 1050 (Pinang). $\frac{1}{m}$ Blyth,

Journ. Asiatic Soc. Bengal, vol. 29, 1860,

p. 141 (Sitang River; not synonymy). $\frac{1}{m}$

Jordan and Starks, Ann. Carnegie

Mus., vol. 11, nos. 3-4, November 5, 1917, p.

453 (Ceylon).

Corvina maculata Cuvier, Hist. Nat. Poiss.,

vol. 5, 1830, p. 126 (Pondichery). $\frac{1}{m}$ Jordan,

Madras Journ. Literat. Science, 1851, p.

132.

Sciaena maculata Günther, Cat. Fishes Brit.

Mus., vol. 2, 1860, p. 241 (compiled). $\frac{1}{m}$ Day,

Fishes of India, pt. 2, 1876, p. 190 (note on

Cantor's specimen); Fauna British India,

Fishes,

vol. 2, 1889, p. 119. $\frac{1}{m}$ Zugmayer, Abhandl. Kon.

Bayer. Akad. Wiss., math.-physik. Klasse,

Caranx belengerii Cuvier, Hist.
Nat. Poiss., vol. 9, p. 116, 1833 (type
locality, Malabar). — Bleeker,
Verh. Batavia. Genoot. (Nal.
Schith. Bengal), vol. 25, p. 44, 1853
(reference).

21864. Biri Channel, east coast of Luzon.
June 1, 1909. Length 106 mm.

16108. Bolalo Bay, Palawan Island.
December 21, 1908. Length 87 mm.

14805 to 14807, 15560 to 15562, 15564, 15566.
Bugsuk Island, Balabac: January 5,
1909. Length 76 to 102 mm.

15310, 15311, 15314, 16779, 23710, 23711.
Busin Harbor, Burias Island. March
8, 1909. Length 81 to 98 mm.

22281, 22283, 23426, 23427. Butauanan
Island, east coast of Luzon. June 13,
1909. Length 94 to 97 mm.

14251 and 14255. Candaraman Island,
Balabac. January 4, 1909. Length 52 to
56 mm.

Scomber hippos (not Linnaeus)
Lichtenstein, descript. Animal.,
Forster, pp. 155, 199, 1844 (Tropical
 Pacific, Tahiti).

Caranx hippos Günther, Cat. Fish.
Brit. Mus., vol. 2, p. 449, 1860
 (Madagascar; Natal; China; Amoy;
 Yanna; Ceylon; Pinang Sea; Port
 Essington). — Day, Fishes of Malabar,
 p. 86, 1865. — Günther, Trans. Zool. Soc. London,
 vol. 6, p. 431, 1866.
 — Playfair, Fishes of Zanzibar, p. 61,
 1866 (Aden; Zanzibar).

— Günther, Journ. Mus. Godeffroy, vol. 5,
 pt. 11, p. 131, pl. 84, 1876 (Samoa; Yanna; Tahiti).
 — Day, Fishes of India, pt. 2, p. 216,
 1876. — Peters, Monatsb. Akad. Wiss.
Berlin, p. 36, 1876 (1877) (New Britain).
 — Martens, Preuss. Exped. Ost Asien, vol. 1, p.
 391, 1876 (Laguna de Taal, Luzon).

203
toward hatching. All these appear
to males. They were easily recognized
among the series of specimens by their
rather full throats.

- Günther, Rep. Voy. Challenger,
vol. 1, pt. 6, pp. 58, 59, 1880 (Papeete,
Tahiti; Hilo). — Károli, Termesz.
Füzetek, Budapest, vol. 5, p. 160, 1881
(Singapore).
- Macleay, Proc. Linn. Soc. New South
Wales, vol. 5, pt. 4, p. 535, 1881 (Australia);
vol. 7, p. 355, 1882 (New Guinea).

— Meyer, Anal. Soc. Españ. Hist. Nat.
Madrid, vol. 14, p. 25, 1885 (Manado,
Celebes; Cebu).

— Day, Fishes of India, Suppl., p.
789, 1888; Fauna British India,
Fishes, vol. 2, p. 154, 1889.

— Sauvage, Hist. Madagascar, Poiss.,
p. 325, pl. 12a fig. 2, 1891 (types of
Caranx sexfasciatus ^{and} C. peronii), p. 518
(reference).

some dull orange spots on the
lower side of the head and 3 rows
of scales on the cheek. Bleeker's
figure of Amia moluccensis is without
any of the usual markings, the
spinous dorsal terminally blackish
and the cheek with 4 rows of scales.
An examination of the example reported
as ~~Amia~~ Amia ~~fusca~~ and figured by
Jordan and Seale shows it to belong
to something different.

Four of our examples from the Cataingan
Bay series, 91 to 108 mm. long, taken
April 17, 1908, show them to belong to
the peculiar condition of buccal incubation.
Each has its mouth and pharynx crammed
with eggs, some in a well developed stage

~~Caranx hippo~~ (~~not Linnaeus~~)
— Elera, Cat. Fauna Filipinas, vol.
1, p. 510, 1895 (Luzon; Cebu;
Laguna de Taal; Batangas).

— Pellegrin, Bull. Mus. Hist. Nat.
Paris, vol. 18, p. 206, 1912 (Port
Sandwich, New Hebrides).

and below silver. Iris yellow. Fins^{no}
yellowish. Length 12 mm. (Bleeker.)

Borneo. Recorded from Samar by Elera.
Bleeker had but one specimen.

Caranx hippus Klunzinger, Verh.
 zool. bot. Gesell. Wien, vol. 21, p.
 465, 1871 (Red Sea); Sitzs. Ber.
 Akad. Wiss. Wien, math.-naturw. Kl.,
 vol. 80, pt. 1, p. 377, 1879 (1880)
 (Cleveland Bay). ~~Fische Roth.~~
~~Meer., vol. 1, p.~~

Caranx (Caranx) hippus Klunzinger,
 Fische Roth. Meer., vol. 1, p. 100, 1884.

than pupil and just above tubes
of lateral line. Median dark
predorsal line from origin of spinous
dorsal forward to middle of interorbital.
Dorsals grayish brown, also caudal,
other fins paler to whitish. Larger
dorsal and anal spines burnished
with silvery.

Red Sea, Natal, East Indies, Philippines,
Micronesia, Polynesia.

Our numerous examples all agree in
the type of coloration described above.
In this they differ from Bleeker's
figure of Amia chrysopomus as that
shows only one dark longitudinal line,
which extends from above the eye to the
caudal peduncle above. Also he shows

Caranx flavoceruleus Schlegel,
Fauna Japonica, Poiss., pts. 5-6,
p. 110, pl. 59, fig. 2, 1844 (type
locality, South west coast of Japan).

Caranx flavoceruleus
— Jordan and Snyder, Annot.
Zool. Japon., vol. 3, p. 67, 1901
(reference). — Snyder, Proc.
U. S. Nat. Mus., vol. 42, 1912, p.
411 (Kagoshima).

Caranx flavo-coeruleus Bleeker,
Verh. Batavia. Genoot. (Nal. Ich.
Japon.), vol. 25, p. 14, 1853 (reference).

Cuv 179

Johnius osseus (Day)

Sciæna ossea Day, Fishes of India, pt. 2, 1876, p. 193, pl. 46, fig. 3. Malabar coast of India; Fauna British India, vol. 2, 1889, p. 123.

Bola ossea Jordan and Starks, Ann. Carnegie Mus., vol. 11, no. 3-4, November 5, 1917, p. 453 (Ceylon).

Depth $3\frac{3}{4}$; head $3\frac{1}{3}$. Snout 5 in head; eye 5, 1 to $1\frac{1}{4}$ in snout, $1\frac{1}{2}$ in interorbital; jaws nearly even; maxillary reaches opposite hind eye edge, length $2\frac{1}{5}$ in head; 3 small pores across snout, 5 along free edge of skin but no lateral lobe; 2 small central pores below symphysis of mandible and 2 more large ones laterally and posteriorly; teeth villiform, outer upper row enlarged; interorbital low; preopercle rather strongly denticulate whole extent.

Caranx parapistes Richardson,
Voy. Erebus and Terror, Fisher,
p. 136, pl. 58, figs. 6-7, 1848 (type
locality, Torres Strait; Port
Essington).

line large, simple, well exposed
and crenulate basal scale. ~~each~~

~~side~~ Scales with
13 to 18 basal radiating striae;
102 to 157 ~~with~~ apical denticles, with 1
to 3 transverse series of basal elements;
circuli fine and apical obsolete or
anastomosing irregularly.

D. VII - I, 9, I, third spine $1\frac{3}{4}$ to $1\frac{7}{8}$
in total head length, first branched
ray $1\frac{1}{3}$ to $1\frac{2}{5}$; A. II, 8, I, second spine
 $2\frac{2}{3}$ to 3, second anal ray 2 to $2\frac{1}{10}$;
caudal $1\frac{1}{5}$ to $1\frac{1}{4}$, hind edge slightly
emarginate, upper lobe often little
longer; least depth of caudal peduncle
2 to $2\frac{2}{5}$; pectoral $1\frac{1}{2}$ to $1\frac{3}{5}$; ventral
 $1\frac{2}{3}$ to $1\frac{7}{8}$.

Light brown generally, becoming

Carany puapok Thiollière, Fauna
Woodlark, p. 173, 1857 (type
locality, Woodlark Island).

Carany papuensis Alleyne and
Macleay, Proc. Linn. Soc. New
South Wales, vol. 1, p. 325, pl. 10,
fig. 3, 1876 (type locality, Hall
Sound, British New Guinea).
— McCulloch, Mem. Queensland
Mus., vol. 8, pt. 1, p. 69, p. 13,
January 30, 1924 (type; Solomons).

1544

Scales 55 along above lateral line to caudal base, 45 along below; 6 above, 15 below; cycloid on head and chest, ctenoid on body; small scales on anal membranes over basal half (apparently also on soft dorsal according to figure).

D. X, I, 25, second spine $2\frac{1}{4}$ in head, first ray $3\frac{2}{3}$, twenty second ray $2\frac{2}{3}$; A. II, 7, second spine short, $4\frac{1}{5}$ in head or $2\frac{1}{4}$ in postocular, first ray $2\frac{2}{3}$ in head; caudal $1\frac{1}{4}$, cuneate; least depth $3\frac{1}{8}$; pectoral $1\frac{1}{2}$; ventral $1\frac{3}{5}$.

Brownish gray or stone colored along back, becoming dull white on sides and below. Opercle bluish black. First dorsal black on upper half, outer edges of caudal, anal and paired fins gray. Length 175 mm. (Day.)

Malabar coast of India.

Caranx carangus (not Bloch)
Sauvage, Hist. Madagascar, Poiss;
p. 325, 1891 (part).

paler to whitish below, especially
on abdomen and lower surface of
head. Head largely brownish above.
Iris pale or whitish to deep neutral
gray, with dark lateral band crossing.
Dark brown line follows along edge of
back along bases of both dorsals.
Second narrow dark brown line
from above eye, ^{anteriorly} to upper surface of
caudal peduncle anteriorly, where
fading out. Third broad horizontal ^{deep brown}
band from snout tip through eye and
midway along side to caudal base,
though behind eye band narrowing
considerably and fading behind. At
caudal base and slightly above middle
small round black spot, much smaller

Caranx latus (not Agassiz)
Fowler, Proc. Acad. Nat. Sci.
Philadelphia, p. 501, 1900
(Honolulu).

Carangus latus Jenkins, Bull. U.
S. Fish Comm., vol. 22, p. 444, 1902
(1903) (Honolulu).

278

Depth $2\frac{3}{5}$ to $2\frac{7}{8}$; head $2\frac{1}{2}$ to $2\frac{3}{5}$, width $1\frac{7}{8}$ to 2. Snout $4\frac{1}{5}$ to $4\frac{1}{2}$ in head ~~from snout tip~~; eye $2\frac{1}{2}$ to 3, greater than snout or interorbital; maxillary reaches opposite eye center, expansion $2\frac{3}{4}$ in eye, length $2\frac{1}{10}$ to $2\frac{1}{3}$ in head; bands of villiform teeth in jaws, on vomer and palatines; interorbital 4 to $4\frac{1}{4}$, nearly level; preopercle ridge entire, edge minutely serrate at all ages; preorbital edge entire. Gill rakers 6 + 14, lanceolate, longer than gill filaments or 3 in eye.

Scales 23 in lateral line to caudal base and 5 or 6 more on latter, 2 above, 6 below, 2 to 4 predorsal, 2 rows on cheeks. Tubes in lateral

Carangus elacate Jordan and
Evermann, Bull. U. S. Fish Comm.,
vol. 22, p. 177, 1902 (1903) (type
locality, Honolulu); vol. 23, pt. 1,
p. 190, pl. 31, 1903 (1905) (type).

Caranx elacate Fowler, Mem. Bishop
Mus., vol. 10, p. 147, pl. 13, A, 1928
(Honolulu; type).

Caranx semisonnus Fowler, Journ.
Acad. Nat. Sci. Philadelphia, ser.
2, vol. 12, p. 510, pl. 14, upper fig.,
1904 (type locality, Padang,
Sumatra).

eye edge, length 2 in head; band of fine upper teeth with outer row little enlarged, all lower teeth uniformly smaller; interorbital 4, little convex; hind preopercle edge denticulate.

Scales 45 along above lateral line to caudal base, 40 along below; 6 above, (7 below on figure; 6 rows on cheeks; soft vertical fins largely scaly over basal half of each).

D. X, I, 28 or 29 (figure shows 26, I, second spine $1\frac{2}{3}$ in head, first ray $3\frac{2}{3}$; A. II, 8, I, second spine 3, fourth ray $2\frac{1}{8}$; caudal $1\frac{1}{3}$, cuneate, with broad median point behind; least depth of caudal peduncle $3\frac{3}{5}$; pectoral $1\frac{1}{2}$; ventral $1\frac{3}{5}$).

Above bluish or greenish gray, sides

1499

Carangus marginatus (not Gill)
Jenkins, Bull. U. S. Fish Comm.,
vol. 22, p. 444, 1902 (1903) (Honolulu).
— Jordan and Evermann, Bull.
U. S. Fish Comm., vol. 23, pt. 1,
p. 191, 1902 (1903) (Honolulu).

275

Amia fusca (Duoy and Yarnard)

Apogon fuscus Duoy and Yarnard, Voy.
Iranie, Zool., pts. 8-9, Jan. 29 - May 26, 1825,
p. 345. Guam. — Günther, Journ. Mus.
Godeffroy, vol. 1, pt. 1, 1873, p. 22 (East
Indies and Fiji).

Amia fusca Jordan and Seale, Bull. Bur.
Fisher., vol. 25, 1905 (1906), p. 244, fig. 38
(Upia).

Apogon cupreus (Ehrenberg) Cuvier, Hist. Nat.
Poiss., vol. 2, 1828, p. 159. Red Sea. — Günther,
Cat. Fishes Brit. Mus., vol. 1, 1859, p. 237 (copied).

Apogon moluccensis Valenciennes, Nouv. Ann.
Mus. Hist. Nat. Paris, ^{vol. 1,} 1832, p. 54. Amboina.
— Weber, Siboga Exped., vol. ^{57, Fische,} 65, 1913, p. 229
(Kawa, west Ceram).

[? Apogon guamensis Valenciennes, Nouv.
Ann. Mus. Hist. Nat. Paris, vol. 1, 1832,
p. 54. Guam.]

Caranx marginatus ~~not a new species~~

Fowler, Proc. Acad. Nat. Sci.

Philadelphia, p. 81, Jan. 1905

(Honolulu). — Jordan and

Seale, Bull. Bur. Fisher., vol. 25,

p. 231, 1905 (1906) (Samoa).

— Jordan and Jordan, Mem. Carnegie
Mus., vol. 10, no. 1, p. 39, Dec. 1922
(reference).

— E. K. Jordan, Proc. U. S. Nat. Mus.,
vol. 66, art. 33, p. 15, 1925 (Honolulu).

Amia moluccensis Bleeker, Atlas Ichth.

Ind. Néerl., vol. 7, 1873-76, p. 93 (Sumatra, Singapore, Banka, Cocos, Bawean, Bali, Celebes, Sangir, Timor, Ceram, Amboina, Goram); ~~vol. 8, 1876-77, pl. (44) 347, fig. 1.~~

Apogon chrysopomus Bleeker, Nat. Tijds.

Ned. Indië, vol. 7, 1854, p. 239. Macassar, Celebes. — Günther, Cat. Fishes Brit. Mus., vol. 1, 1859, p. 240 (copied). — Károli, Termesz. Füzetek, Budapest, vol. 5, 1882, p. 152 (Singapore).

Amia chrysopoma Bleeker, Atlas Ichth.

Ind. Néerl., vol. 7, 1873-76, p. 86 (Singapore, Bawean, Celebes, Amboina); vol. 8, 1876-77, pl. (71) 349, fig. 1. — Evermann and Seale, Bull. Bur. Fisher., vol. 26, 1906 (1907), p. 72 (Bacon).

Caranx thompsoni (Seale) Jordan
and Evermann, Bull. U. S. Fish
Comm., vol. 23, pt. 1, p. 535, 1903 (1905)
(type locality, Hawaiian Island).
— Jordan and Seale, Bull. Bur.
Fisher., vol. 25, p. 230, 1905 (1906)
(Hawaii). — Jordan and Snyder,
Bull. Bur. Fisher., vol. 26, p. 210,
1906 (1907) (note).

1510

Case 179 Johnius borneensis (Bleeker)

Otolithus borneensis Bleeker, Natuurk.
Tijdschr. Nederland. Indie, vol. I, 1850,
p. 268. Bandjermassing, in rivers, Borneo.

Scaena borneensis Günther, Cat. Fishes
Brit. Mus., vol. 2, 1860, p. 294 (compiled).

Elera, Cat. Fauna Filipinas, vol. 1, 1895,
p. 501 (Samar).

Pseudosciaena borneensis Bleeker, Verhandl.
Kon. Akad. Wetensch. Amsterdam, series 3,
vol. 14, 1874, p. 36 (Borneo); Atlas Ichth.
Ind. Néerland., vol. 9, 1877, pl. (2) 385,

Fig. 4.

Johnius borneensis Seale, Philippine Journ. Sci., vol. 5,
No. 4, Oct. 1910, p. 279 (Sandakan, Borneo).

Depth $3\frac{1}{3}$; head 3, width 2. Snout 4 in
head; eye 4, equals snout or interorbital;
maxillary nearly reaches opposite hind

Caranx oshimai Wakiya, Ann.

Carnegie Mus., vol. 15, p. 189, pl.

27, fig. 1, 1924 (type locality, Formosa).

254

5177 and 5178. Alibijaban Island,
Ragay Gulf, Luzon. March 6, 1909.
Length 50 to 55 mm.

15756 and 23378. Alimango Bay,
Burias Island. March 5, 1909.
Length 39 to 46 mm.

19640. Buluan Island, Samales Group,
south of Zamboanga. (Length 56 mm.)
September 13, 1909. v

7243 and 7244. Busbus Point, Siasi
Island, between Jolo and Jawi Jawi.
September 20, 1909. Length 44 to 60 mm.

15099 and 15100. Capulagan Bay,
Pagbilao Island. February 24, 1909.
Length 52 to 54 mm.

23646. Caracaran, Batan Island.
June 8, 1909. Length 65 mm.

15060, 23094, 24094. Canmahala Bay,
Ragay Gulf, Luzon. March 11, 1909. Length
51 to 58 mm. Two males with buccal ova.

1503

Depth $2\frac{1}{2}$ to $2\frac{2}{3}$; head $2\frac{3}{4}$ to $3\frac{1}{4}$,
width $2\frac{3}{5}$ to $3\frac{1}{6}$. Snout 3 to $3\frac{1}{2}$
in head from snout tip; eye 4
to $8\frac{1}{2}$, 1 to $2\frac{4}{5}$ in snout, 1 to $1\frac{2}{5}$
in interorbital, with broad
adipose lids; maxillary reaches
^{to $\frac{2}{5}$ eye diameter beyond eye with age,}
 $\frac{1}{2}$ to $\frac{3}{4}$ in eye, expansion $1\frac{1}{3}$ to
 ^{$1\frac{1}{5}$ times eye with age,}
 $1\frac{3}{4}$ in eye, length 2 to $2\frac{1}{10}$ in
head from snout tip; interorb-
ital $3\frac{1}{8}$ to 4 , convexly elevated.
Gill rakers $7 + 15$ to 18 ,
lanceolate, equals gill filaments
or $1\frac{2}{5}$ in eye.

Scales 43 or $44 + 30$ or 31 in
lateral line, arch $1\frac{2}{5}$ to $1\frac{1}{2}$ in
straight section; scute depth
 $1\frac{7}{8}$ to 2 in eye. Breast densely
scaly. Circuli 13 to 30 , complete.

D. I, VIII, I, 18, I to 20, I, fourth spine $2\frac{1}{3}$ to $3\frac{1}{3}$ in total head length, first branched ray $1\frac{9}{10}$ to 2; A. II - I, 14, I to 16, I, second spine 2 to $2\frac{1}{3}$, first branched ray $1\frac{3}{4}$ to $2\frac{1}{10}$; caudal $1\frac{1}{8}$ to $1\frac{2}{5}$, strongly forked; least depth of caudal peduncle $6\frac{1}{2}$ to $7\frac{1}{4}$; pectoral 1 to $1\frac{1}{10}$, rays II, 16, length $2\frac{1}{4}$ to 4 in fish without caudal, reaches fourth to sixth scute of lateral line; ventral $2\frac{1}{6}$ to $2\frac{1}{5}$ in total head length, rays I, 5.

Back brown, below silvery white. Back and sides with 6 or 7 broad darker vertical bands, broader than interspaces,

fading with age. Iris white to gray. Mandible tip brownish. Spinous dorsal neutral dusky. Soft dorsal and caudal with pale gray marginally, otherwise pale or whitish like other fins.

Red Sea, Arabia, Zanzibar, Beira, Delagoa Bay, Natal, Madagascar, Mayotte, Bourbon, India, Ceylon, Andamans, Nicobars, Malaya, East Indies, Philippines, China, Formosa, Riu Kiu, Japan, Northern Australia, Queensland, Melanesia, Micronesia, Polynesia, Hawaii.

22089. Abuyog, Leyte. July 26, 1907.¹⁵⁰⁶
Length 90 to 100 mm. Four examples.
A. II - I, 17 or 18.

8084. Alimango Bay, Burias
Island. March 5, 1909. Length 525 mm.

Six examples. Atulayan Bay,
Luzon. June 17, 1909. Length 88 to
110 mm.

12715¹²⁷¹⁶, " Atulayan Bay, Luzon.
June 18, 1909. Length 90^{to 104} mm. A. II - I, 17.

14032 to 14037, 14039, 20258,
22752 to 22753. Baganga Bay.
May 13, 1908. Length 52 to 180 mm.
A. II - I, 16 to 18.

5463, 9886. Basud River, Luzon.
June 15, 1909. Length 118 to 200 mm.
A. II - I, 16.

16596, 16597. Beacon Reef.
Catbalogan, Samar. April 16, 1908.
Length 173 to 186 mm. A. II - I, 16.

~~1525~~

vertical fins all more or less dusky to dusky gray terminally. Paired fins pale, sometimes sprinkled with dark dots. Pectoral with gray blotch within axil close behind origin of fin.

India, Malay Peninsula, Singapore, Indo China. According to Day it attains a large size. Known chiefly by its pale yellowish gray color.

3 examples. A. N. S. P. Bombay.

Bombay Natural History Society. 1925.
Length 173 to 203 mm.

52986 to 52989 A. N. S. P. Bombay.

Prof. F. Hallberg. 1923. Length 70 to 114 mm.

20283. Below mouth of
Mindanao River, Cotabato.
May 20, 1908. Length 74 mm.
A.II - I, 17.

12087 [747]. Cavite market.
December 1, 1908. Length 140 mm.

A.II - I, 16. a.II - I, 18. [1874]
13865. Cebu market. August 31, 1909. Length 73 mm.
7547, 11724. Cotabato, Mindanao.

May 20, 1908. Length 80 to 125 mm.
Three examples. A.II - I, 17.

21350, 22164. Davao, Mindanao.
May 16, 1908. Length 60 to 129 mm.
A.II - I, 16 or 17.

20481, 20482. Endeavour Strait,
Palawan. December 22, 1908.
Length 82 to 84 mm. A.II - I, 16.

8402. Giant River, Port Dupon,
Leyte. March 16, 1909. Length 268 mm.
9094 to 9096. Gigoro Point, Dinapundan
Bay, Samar. July 28, 1909. Length
274 to 375 mm.

forward nearly to snout tip. Scales with 7 to 9 basal radiating striae; 18 to 35 apical denticles, with 8 to 11 transverse series of basal elements; circuli very fine.

D. XI, 7, I to 32, I, second spine $1\frac{3}{5}$ to $1\frac{3}{4}$ in head, third ray $2\frac{2}{5}$ to $2\frac{1}{2}$; A. II, 7, I, second spine $2\frac{1}{10}$ to $3\frac{3}{4}$, first ray $1\frac{1}{2}$ to $1\frac{3}{4}$; caudal 1 to $1\frac{1}{2}$, cuneate, rounded behind, lower median rays longest; least depth of caudal peduncle $3\frac{1}{4}$ to 4; pectoral $1\frac{1}{5}$ to $1\frac{1}{2}$; ventral $1\frac{1}{5}$ to $1\frac{4}{5}$, first ray ends in short filament.

mauve brown above or back vinaceous buff to buff below, under surface whitish. Iris pale to slate. Inside gill opening neutral dusky. Opercle neutral or slate brown. Spinous dorsal dusky or neutral dusky terminally. Soft dorsal and caudal grayish, other fins whitish. Sometimes

~~598. Yondra Island. September
20, 1909. Length 920? mm, caudal
tips broken.~~

6034. Hinunangan Beach,
Leyte. July 30, 1909. Length 117
mm. $\underline{\underline{A. II}} - \underline{\underline{I}}, 17.$

19398, 19400. Iloilo market.
March 28, 1908. Length 75 to 78 mm.
 $\underline{\underline{A. II}} - \underline{\underline{I}}, 16.$

20019. Langao Point, Cavite.
March 23, 1908. Length 70 mm.
 $\underline{\underline{A. II}} - \underline{\underline{I}}, 16.$

20197. Langley Point, Cavite.
March 23, 1908. Length 79 mm.
 $\underline{\underline{A. II}} - \underline{\underline{I}}, 17.$

5243 to 5245. Malabang,
Mindanao. May 21, 1908. Length 77
to 84 mm. $\underline{\underline{A. II}} - \underline{\underline{I}}, 16$ or $17.$

22465, 22466. Malagao, Mindoro.
December 11, 1908. Length 64 to 68 mm.
 $\underline{\underline{A. II}} - \underline{\underline{I}}, 15$ and $17.$

Johnius glaucus Fowler, Journ. Bombay
Nat. Hist. Soc., vol. 30, No. 4, November
1926, p. 10 (Bombay); vol. 32, No. 2,
October 20, 1927, p. 260 (Bombay).

Depth $2\frac{4}{5}$ to $3\frac{3}{4}$; head $2\frac{7}{8}$ to $3\frac{1}{2}$,
width $1\frac{3}{4}$ to 2. Snout $3\frac{1}{8}$ to $3\frac{3}{4}$ in head;
eye $3\frac{1}{2}$ to $4\frac{1}{3}$, 1 to $1\frac{2}{5}$ in snout, 1 to $1\frac{1}{4}$
in interorbital; maxillary reaches $\frac{2}{5}$
to $\frac{1}{2}$ in eye, expansion $1\frac{4}{5}$ to 2 in eye,
length $2\frac{1}{5}$ to $2\frac{4}{5}$ in head; chin with 5
pores; mandibular teeth in villiform
band, with inner posterior little larger;
interorbital $3\frac{1}{2}$ to $4\frac{1}{4}$, broadly convex;
preopercle edge membranous or denticulate.
Gill rakers 5 or 6 + 12 or 13, lanceolate,
short, $\frac{1}{2}$ gill filaments which $\frac{1}{2}$ eye.

Scales 45 to 50 ^{along above} ~~in~~ lateral line to
caudal base and 5 more on latter; ^{scales 48 in lateral line to caudal base,} each
tube with short branch above and below;
6 scales above, 7 to 9 below, 19 to 25 predorsal

1509

Four examples. Manila Bay.
December 9, 1907. Length 75 to 93 mm.

20703. Manila Harbor.
March 16, 1908. Length 55 mm.

13782. Manila market. June 24,
1908. Length 155 mm. A. II - I, 15.
6971. Manila market. April 29,
1909. Length 418 mm.

7302, 21150. Mansalay, Mindoro.
June 4, 1908. Length 75 to 138 mm.
Six examples. Two with A. II - I, 17.

6221, 19723. Mantaguin Bay,
Palawan. April 2, 1909. Length 111 to
123 mm. A. II - I, 16 or 17.

13784, 13784, Mati, Puyada Bay,
Mindanao. May 15, 1908. Length
105 to 158 mm. A. II - I, 16 or 17.

Six examples.

8601 to 8604. Matnog Bay.
May 31, 1909. Length 278 to 308 mm.

9350. Murcielago Bay, Mindoro. August
20, 1909. Length 365 mm.

car 179

1595

Johnius dussumieri (Cuvier)

Corvina dussumieri Cuvier, Hist. Nat. Poiss.,
vol. 5, 1830, p. 118. Malabar. Valenciennes,
Règne Animal, Cuvier, Ed. Ill., 1839, pl.
28, fig. 2.

Johnius dussumieri Cantor, Journ. Asiatic
Soc. Bengal, vol. 18, pt. 2, 1849, p. 1046
(Pinang, Malay Peninsula, Singapore).

Bleeker, Verhandl. Kon. Akad. Wetensch.
Amsterdam, vol. 14, series 3, 1874, p. 49
(compiled).

Sciaena glaucus Day, Fishes of India, pt. 2,
1876, p. 192, pl. 46, fig. 2. India. Johnstone,
Fasc. Malayensis, Annandale and Robinson,
Zool., vol. 2, 1903, p. 293 (outside Patani
Bay). Pellegrin, Bull. Soc. Zool. France,
vol. 30, 1905, p. 84 (Baie de Alag, Tonkin).

Sciaena glauca Day, Fauna British India, ^{Fishes}
vol. 2, 1889, p. 122. Pearson, Ceylon Administr.
Rep., 1915-18, p. F14.

Sciaena glaucus Pearson, op. cit., 1915-18, p. F13.
(Error.) Ceylon. Administr. Rept.

9351, 9352. Murcielago Bay.
August 21, 1909. Length 455 to 475 mm.

9040. Labatar Point, Samar.
July 24, 1909. Length 343 mm.

20329, 20331. Nanyan River, Mindoro.
June 5, 1908. Length 60 to 68 mm.
A. II - I, 17.

Two examples. Nato River tidal.
June 18, 1909. Length 65 to 98 mm.
A. II - I, 16 or 17.

11970. Lomuan River, Camp Overton,
Mindanao. August 6, 1909. Length
208 mm. A. II - I, 16.

20658. North end of Endeavour Strait,
Palawan. December 22, 1908. Length
84 mm. A. II - I, 16.

20404. Palawan Reef, Palawan.
April 6, 1909. Length 142 mm.
A. II - I, 16.

caudal base, 40 along below; 4 or 5 above, 12 below; soft vertical fins with basal half finely scaled.

D. IX or X, I, 32 or 33, second spine 2 in head, first ray $2\frac{2}{5}$; A. II, 7 or 8, second spine $2\frac{3}{5}$, $1\frac{1}{3}$ in postocular, first ray 2 in head; caudal 1, cuneate with median point behind; least depth of caudal peduncle $3\frac{2}{5}$; pectoral $1\frac{1}{5}$; ventral $1\frac{3}{5}$.

Above bluish green, below silvery. Iris yellowish, above brownish. Opercle with diffuse purplish spot above. Body and fins dusted with grayish. Fins yellowish. Length 115 mm. (Bleeker.)

Only known from Padang, Benculen, Tieu and Trissan in Sumatra.

13950. Paluan Bay, Mindoro.
 December 11, 1908. Length 128 mm.
 A. II - I, 16.

22622. Paluan River, Mindoro.
 December 11, 1908. Length 74 mm.

A. II - I, 15.

19734. Panabutan Bay, Mindanao.
 February 5, 1908. Length 82 mm.
 A. II - I, 17.

Three examples. Panabutan Bay.
 Length 79 to 95 mm. A. II - I, 16.

22449. Pangasinan River.
 December 16, 1908. Length 78 mm.

19931. Parang, Mindanao.

May 23, 1908. Length 193 mm. A. II - I, 16.

Twelve examples. Port Janelo,
 Luzon, from 2 miles up river.
 July 13, 1908. Length 42 to 52 mm.
 A. II - I, 17 or 18.

13967. Port San Vicente, Palani River.
 November 14, 1908. Length 115 mm.
 A. II - I, 17.

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Johnius hypostomus (Bleeker)¹⁵¹³

Corvina hypostoma Bleeker, Natuurk.

Tijdschr. Dierk. Nederland. Indië, vol. 5, 1853,
p. 479. Padang, Sumatra.

Sciæna hypostoma Günther, Cat. Fishes
Brit. Mus., vol. 2, 1860, p. 293 (copied).

Johnius hypostoma Bleeker, Verhandel.
Konink. Wetensch. Amsterdam, series 3, vol.
14, 1874, p. 42 (Sumatra); Atlas Ichth.
Ind. Néerland., vol. 9, 1877, pl. (1) 384,
fig. 2.

Depth $3\frac{1}{5}$ to $3\frac{1}{2}$; head $3\frac{2}{3}$ to 4. Snout
 $4\frac{1}{2}$ in head; eye 4 to $4\frac{1}{2}$, little larger to
subequal with snout, $1\frac{1}{2}$ in interorbital;
maxillary reaches opposite eye center,
length 3 in head; teeth villiform, outer
upper row slightly enlarged, lower teeth
uniformly low; interorbital low; preopercle
edge denticulate.

Scales 45 along above lateral line to

7193. Port San Vicente. November 16, 1908. Length 335 mm. ⁵⁴¹²

5412. Ragay River, Ragay Gulf, Luzon. March 10, 1909. Length 178 mm. A. II - I, 16.

22324, 22325. River at Pasacao, Luzon. March 9, 1909. Length 112 to 178 mm. A. II - I, 16 or 17.

8850. San Miguel Bay. June 15, 1909. Length 272 mm.

8780. Santiago River, Pagapas Bay, Luzon. February 20, 1909. Length 93 mm. A. II - I, 16.

22343. Shore above Iloilo River, Iloilo. June 2, 1908. Length 63 mm. A. II - I, 16.

21386. Sebaste Island. January 2, 1909. Length 85 mm. A. II - I, 16.

¹¹⁵⁷⁰ 12314. Stream at Magnas, Lagonoy Gulf, Luzon. June 17, 1909. Length ¹¹⁷⁰ 120 mm. A. II - I, 17.

21541. Subic Bay. January 7, 1908. Length 124 mm. A. II - I, 17.

1543

but lower rays of both pale yellowish.
Iris gray.

India, East Indies, Philippines,
China. The nominal Corvinus papuensis
is evidently synonymous, Have seeming
to distinguish it chiefly by the larger
scales.

4 examples. A. N. S. P. Oigan, Luzon.

Rev. Joseph Clemens. 1923. Length 90 to 148 mm.

52717 A. N. S. P. Orion, Luzon.

Rev. Joseph Clemens. 1923. Length 108 mm.
Purchased.

A 536. Tambun Sigumbul.
September 14, 1909. Length 310 mm.

24127 to 24129. ~~Tanun~~
Point. D. 5562. Tanun Point
(Jolo), N. 87° E., 17.2 miles (lat.
 $5^{\circ}54'20''$ N., long. $121^{\circ}13'12''$ E.),
vicinity of Jolo. September 19,
1909. Length 50 to 63 mm.

A. II - I, 16 or 17.

Thirteen examples. Tilig, Lubang.
July 14, 1908. Length 66 to 137 mm.
A. II - I, 17 or 18.

A 537, A 538. Tulayan Island.
September 15, 1909. Length 295 to 300 mm.

21593, 22115. Yana River, Legaspi.
June 7, 1909. Length 85 to 103 mm.
Length 85 to 103 mm. A. II - I, 16.

lly convex. Gills
 48 or 49 in the
 case; 7 above,
 Scales with 9
 striae; 36 to
 with 7 or 8
 elements; cir
 or XI, 27, I or
 1/5 in head, first
 second spine 2
 to 2; caudal
 th of caudal p
 1 1/3 to 1 2/5; ven
 brown above, w
 utral dusky to

all rays
lateral line
8 below, 3
to 11 basals
38 apical
transverse
culi line
28, ±, thin
st ray $2\frac{3}{5}$
 $\frac{1}{2}$ to $2\frac{3}{4}$,
 $\frac{1}{5}$ to $1\frac{1}{4}$, c
heduncle 3
tral $1\frac{1}{2}$ to
white below
minally.
also paired

7 + 4,
ne to
o
al
al
row
rd spine
5 to $2\frac{4}{5}$;
third
cuneate;
 $3\frac{1}{2}$ to $3\frac{3}{4}$;
 $1\frac{3}{5}$.
Spinous
Soft
ed fins,

21396. Ambonia Point, Ambonia,
Dutch East Indies. December 6,
1909. Length 75 mm. A. II - I, 17.

~~14131~~ 12860, 12861, 14131 to 14133,
21261, 21262. Tifu Bay, Buru.
December 10, 1909. Length 88 to
174 mm. A. II - I, 16 or 17.

A 1188. Gane Road, Gillolo.
December 1, 1909. Length 325 mm.
12175. Powati Harbor, Makyan.
November 28, 1909. Length 173 mm.
A. II - I, 18.

A 1116. Makyan Island. November
28, 1909. Length 517 mm.

A 756. Sipadan Island. September
28, 1909. Length 255 mm.

A 848, A 851. Talisse Island.
November 9, 1909. Length 235 to 245
mm.

21216, 22174. Uhai, Buru Island.
December 9, 1909. Length 83 to 102 mm.
A. II - I, 17 or 18.

p. 451 (Ceylon).

Johnius axillaris Fowler, Proc. Acad. Nat. Sci. Philadelphia, 1927, p. 285 (Vigan; Orion).

Corvina papuensis Hase, Jena Zeitschr. Nat., vol. 51, 1914, p. 531, figs. 4-6. Tami, Kaiser Wilhelms Land, New Guinea.

Johnius papuensis Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 235 (copied).

Depth $3\frac{1}{2}$ to 4; head 3 to $3\frac{1}{3}$, width $1\frac{4}{5}$ to $1\frac{7}{8}$. Snout $3\frac{1}{2}$ to $3\frac{3}{4}$ in head; eye 4 to $4\frac{2}{3}$, $1\frac{1}{8}$ to $1\frac{1}{4}$ in snout, $1\frac{1}{8}$ to $1\frac{1}{4}$ in interorbital; maxillary reaches $\frac{2}{5}$ to $\frac{1}{2}$ in eye, expansion $1\frac{1}{2}$ to $1\frac{2}{3}$ in eye, length $2\frac{1}{4}$ to $2\frac{2}{5}$ in head; outer upper row and inner lower row of teeth enlarged, latter little shorter; interorbital $3\frac{1}{2}$ to

598. Yandra Island. September 20,
1909. Length 920 mm. caudal ends
broken.

6322, 6324. Kowloon, China.
September 18, 1908. Length 165 to
175 mm. A. II - I, 17.

A1003. Locality not given.
Length 112 mm. A. II - I, 16.

can 179

1584

Johnius axillaris (Cuvier)

Corvina axillaris Cuvier, Hist. Nat. Poiss.,
vol. 5, 1830, p. 113. Malabar. $\frac{1}{m}$ Valenciennes,
Voy. Indes Orient. Bélanger, Zool., 1834,
p. 356 (Malabar coast). $\frac{1}{m}$ Günther, Cat.
Fishes Brit. Mus., vol. 2, 1860, p. 302 (no
locality). $\frac{1}{m}$ Day, Fishes of Malabar, 1865,
p. 53 (copied). $\frac{1}{m}$ Sauvage, Bull. Soc. Philomath.
Paris, ~~series~~ 7, vol. 5, 1881, p. 106 (Swatow,
China). ⁹

Sciaena axillaris Day, Fishes of India,
p. 2, 1876, p. 188, pl. 43, fig. 6 (Orissa;
Madras); Fauna British India, ^{Fishes} vol. 2,
1889, p. 116. $\frac{1}{m}$ Rutter, Proc. Acad. Nat.

Sci. Philadelphia, 1897, p. 76 (compiled).

$\frac{1}{m}$ Pearson, Ceylon Administrat. Rep., 1925, p. F14.

Bola axillaris Jordan and Starbuck, Ann.

Carnegie Mus., vol. 11, nos. 3-4, November 5, 1917,

Four examples. Buena Vista,
 Guimares Island. January 14, 1909.
 Length 131 to 155 mm. Breast entirely
 scaly. Arch of lateral line $1\frac{2}{5}$ to $11\frac{3}{5}$
 in straight section. D. I, VIII, I, 20;
 A. II - I, 16 or I, 17.

Centropristes salar Richardson, Trans.
Zool. Soc. London, vol. 3, June 16, 1842,
p. 78 (Port Arthur, Tasmania); Ichth.
Voyage Erebus and Terror, pl. 20, figs. 4-6.

Centropristes (Arripis) salar Richardson,
Ichth. Voyage Erebus and Terror, 1844-48
(1845), p. 29 (Bay of Islands, New Zealand;
Port Arthur; Queen Charlotte Sound and
Norfolk Island).

Arripis salar Günther, Cat. Fishes Brit.
Mus., vol. 1, 1859, p. 254 (Raoul Island,
Norfolk Island, Australia, Port
Arthur). Hector, Colonial Mus. Geol.
Surv. Departm. (Fishes of New Zealand),
1872, p. 2; Notes Edible Fish. New
Zealand, 1872, p. 105, pl. 1, fig. 2.

U. S. N. M., No. 17987. Honolulu.
 Dr. J. H. Streets. Length 125 mm (both).
 Two examples. As Carangus chrysos.
A. II - I, 17 and I, 18.

U. S. N. M., No. 51068. Hawaiian
 Islands. Bureau of Fisheries (04049).
 Length 260 mm. As Carangus latus.
 Scutes 35. A. II - I, 18.

U. S. N. M., No. 52447. Apia, Samoa.
 Bureau of Fisheries. Length 280 mm.
 As Caranx marginatus. Scutes 31.
A. II - I, 18.

U. S. N. M., No. 52725. Hawaiian
 Islands. Bureau of Fisheries (04044).
 Length 278 mm. As Carangus marginatus.
A. II - I, 15.

U. S. N. M., No. 51979. Negro. Dr.
 Bashford Dean. 1901. Length 148? mm.
A. II - I, 17. As Caranx ferdan.

U. S. N. M., No. 55217. Hilo.
Albatross Collection (1215). Length 79 mm.
A. II - I, 17. As Carangus rhabdotus.

1711

Günther, Introd. Study of Fishes, 1880,
p. 395, fig. 165. Macleay, Proc. Linn.
Soc. New South Wales, vol. 5, 1881, p. 351
(east and south coasts of Australia).
Woods, Fish. Fisher. New South Wales,
1883, p. 35, pl. 5. Sherwin, Handbook
New Zealand Fish., 1886, p. 50. Ogilby,
Edible Fishes New South Wales, 1893, p.
20, pl. 9. Waite, Sea Fisher. Rep. Thetis,
1898, p. 43 (Lord Howe Island).

Urophycis salar Schmeltz, Cat. Mus. Godeffroy,
no. 6, 1877, p. 12 (Sydney). (Error.)

Sciaena mulloides rapidissimus (Volander)

Richardson, Trans. Zool. Soc. London,
vol. 3, January 16, 1842, p. 79 (on drawing

U. S. N. M., No. 56081. Mindanao.
Bureau of Fisheries (4292). Length
133 mm. $A_{\text{I}}^{\text{II}} - \text{I}, 17$.

U. S. N. M., No. 56290. Cavite. Dr.
G. A. Lung. Length 59 to 88 mm. Seven
examples. Breast scaled. As
Caranx ignobilis.

U. S. N. M., No. 65771. Marshalls.
Albatross Collection (09037). Length
88 mm. $A_{\text{I}}^{\text{II}} - \text{I}, 15$. As Caranx forsteri.

U. S. N. M., No. 65772. Tari Tari,
Gilberts. Albatross Collection.
Length 190 to 240 mm. Two examples.
 $A_{\text{I}}^{\text{II}} - \text{I}, 17$. As Caranx forsteri.

U. S. N. M., No. 65777. Bora Bora,
Society Islands. Albatross Collection
(05857). Length 64 to 72 mm. Two
examples. $A_{\text{I}}^{\text{II}} - \text{I}, 17$. As Caranx
melampygus.

U. S. N. M., No. 65781. Funafuti; Ellice
Islands. Albatross Collection (08842,
08851). Length 74 to 123 mm. Two examples.
 $A_{\text{I}}^{\text{II}} - \text{I}, 16$ or $\text{I}, 17$. As Caranx forsteri.

1758

vol. 2, no. 1, April 23, 1921, p. 104, fig. 160.

— Fowler, Proc. Acad. Nat. Sci.

Philadelphia, 1923, p. 44 (Melbourne).

— McCulloch, Fishes New South Wales,
ed. 2, 1927, p. 55, pl. 23, fig. 200 b.

Percia marginata Cuvier, Hist. Nat. Poiss.,
vol. 2, 1828, p. 53. "Peron avait rapporté
de son voyage" [locality unknown,
probably Tasmania].

Centropristes truttaceus Cuvier, Hist.
Nat. Poiss., vol. 3, 1829, p. 50. Port Western.

Auripis truttaceus Günther, Cat. Fishes
Brit. Mus., vol. 1, 1859, p. 254 (copied).

— Castelnau, Proc. Zool. Acclimatiz. Soc.
Victoria, vol. 1, 1872, p. 52 (Victoria);

U. S. N. M., no. 71837. Kafa, Okinawa.
Albatross Collection: 1906. Length 70 to
 110 mm. Three examples. Breast scaled.
 As Caranx ignobilis.

U. S. N. M., no. 56089. Philippines.
 Bureau of Fisheries (4165). Length 348?
 mm. Scutes 30. A. II - I, 16. As
Caranx cynodon.

U. S. N. M., no. 72095. Kafa, Okinawa.
Albatross Collection 1906. Length 100 to
 208 mm. Five examples. As Caranx
forsteri.

U. S. N. M., no. 72160. Manila market.
 R. C. Mac Gregor. Length 207 mm.
 A. II - I, 16 or 17. As Caranx forsteri.

U. S. N. M., no. 72180. Lubang,
 Philippines. R. C. Mac Gregor. Length
 108 mm.

U. S. N. M., no. 72271. Iloilo.
 R. C. Mac Gregor. Length 70 mm.

1157

Arripis trutta (Schneider).

Sciaena trutta ^(Forster) Schneider; Syst. Ichth.

Bloch, 1801, p. 542. Cook Strait and

Queen Charlotte Sound, New Zealand.

Perca trutta Cuvier, Hist. Nat. Poiss.,
vol. 2, 1828, p. 53 (New Zealand).

Arripis trutta Gill, Mem. Nat. Acad.
Sci., vol. 6, 1893, p. 116 (reference).

Stead, Fishes of Australia, 1906, pp.
113, 116. Waite, Records Canterbury Mus.,
vol. 1, no. 1, April 25, 1907, p. 20 (reference);

vol. 1, no. 3, June 24, 1911, p. 219 (Palmer
Bay, in 11 to 38 fathoms).

Roughley,
Fishes of Australia, 1916, p. 116, pl. 37.

Waite, Records South Austral. Mus.,

U. S. N. M., no. 72592. Java.
O. Bryant and W. Palmer. Length 280 mm.
As Caranx forsteri.

U. S. N. M., no. 75900. Borneo.
H. C. Raven. Length 225 mm. Lower
gill rakers 15. A. II - I, 17.

U. S. N. M., no. 89040. Tahiti.
J. M. Clements. Length 72 to 78 mm.
Two examples. As Caranx rhabdotus.

U. S. N. M., one example. Papeete,
Tahiti. Dr. W. H. Jones. Length 85 mm.
As Caranx melampygus.

U. S. N. M., one example (with 52360).
Apia, Samoa. Bureau of Fisheries.
Length 90 mm. A. II - I, 16.

U. S. N. M., two examples (with 55367).
Hawaiian Islands. Bureau of
Fisheries. Length 78 mm. A. II - I, 16
or 17. As Caranx forsteri.

gray interval, from 16 or 17 longitudinal stripes, fainter towards belly. Cheeks pearly, with bronze reflections on opercle, upper hind edge and spot about middle of front edge darker. Throat and maxillary white. Iris bronze, yellowish and green. Fins light gray, speckled with black, dorsal and anal flecked with blackish with imperfect narrow blackish edge to dorsal. Caudal blackish olive, hind margin and tips blackish. Pectoral dark. Ventral nearly colorless. Length 406 mm.

(McCoy.)

New South Wales, Victoria, South
and Western Australia.

1521
(with 55423).

U. S. N. M., three examples,
Hilo. Bureau of Fisheries. Length
60 to 90 mm. A. II - I, 16 or 17.
As Caranx forsteri.

U. S. N. M., one example (with
65775). Huahine, Marquesas.
Albatross Collection: Length 70 mm.
A. II - I, 17, Scutes 30.

D. IX, 14, fourth spine $1\frac{7}{8}$ in total head length, first ray $2\frac{3}{5}$; A. III, 10, first ray $2\frac{2}{3}$; caudal $3\frac{2}{3}$ in combined head and body to caudal base, deeply forked; least depth of caudal peduncle $2\frac{3}{5}$ in total head; pectoral $1\frac{4}{5}$; ventral $1\frac{9}{10}$.

Top of head dark olive to level of eye, with paler extension around eye. Top of snout of both jaws, blackish. Back dark olive gray with bronze and steel blue reflections. Sides gradually lighter to ventral edge. Rather more than $\frac{1}{3}$ of each scale in longitudinal rows darker and more olive than lighter

A. n. S. P., one example. Delagoa Bay, Portuguese East Africa. 1922. H. J. W. Bell Marley. Length 182 mm.

A. n. S. P., two examples. Bombay. 1925. Prof. F. Hallberg. Purchased. Length 127 to 132 mm.

A. n. S. P., one example. Ceylon. 1925. Prof. F. Hallberg. Purchased. Length ~~127~~ to ~~132~~ mm. ₁₀₅

~~A. n. S. P.~~

London Internat. Exhib. Cat. Victoria,
1872, pp. 132, 133 (Victoria); Proc.

Zool. Acclimatiz. Soc. Victoria, vol. 2,
1873, p. 127 (Freemantle); Proc. Lin.
Soc. New South Wales, vol. 3, 1878, p. 350
(Port Jackson). — Klunzinger, Sitz. Ber.
Akad. Wiss. Wien, math.-naturw. Classe,
vol. 80, pt. 1, 1879, p. 347 (Wellington,
King George's Sound, Hobson's Bay). —
Johnston, Proc. Royal Soc. Tasmania,
1882 (1883), p. 110 (Tasmania). — McCoy,
vol. 1,
Prodromus Zool. Victoria, dec. 2, 1885,
pls. 16-17.

Centropristis salar Richardson, Proc. Zool.
Soc. London, vol. 7, 1839, p. 95. Port Arthur,
Van diemen's Land.

Caranx melampygus Cuvier

Caranx melampygus Cuvier, Hist.
Nat. Poiss., vol. 9, p. 116, 1833 (type
locality, Waigiu; Rawak, Buru;
Vanicolo; ^{Jerdon, Madras Journ. Nat. Sci., p. 137, 1851} Mauritius). — Bleeker,
Verh. Batavia. Genoot. (Nat. Ichth.
Bengal), vol. 25, p. 44, 1853 (reference);
Nat. Tijds. Ned. Indie, vol. 6, p.
(51) 58, 1854 (Sindangole,
Halmaheira); vol. 12, p. 215, 1856
(Nias), p. 293 (Boleling, Bali);
Act. Soc. Sci. Ind. Neerl., vol. 1,
no. 5, p. 6, 1856 (Amboina); vol. 3,
no. 4, p. 3, 1857-58 (Manado,
Tarrawanko). — Günther, Cat.
Fish. Brit. Mus., vol. 2, p. 446,
1860 (Guadalcanal; Tanga; Wanderer Bay).
— Bleeker, Ned. Tijds. Dierk., vol.
1, p. 152, 1863 (Batjan). — Playfair,
Fishes of Zanzibar, p. 61, 1866 (Zanzibar).

~~1694~~

22099. Abuyog, Leyte. July 26, 1909.
Length 116 mm.

22714. Balayan Bay, Luzon. January 19,
1908. Length 118 mm.

9 examples. Beach near anchorage off
Laet, Luzon. June 15, 1909. Length 61 to 110 mm.

20287. Below mouth Mindanao River,
Cotabato, Mindanao. May 20, 1908. Length 75 mm.

21242. Below mouth Mindanao River,
Cotabato. May 22, 1908. May 22, 1908. Length 88 mm.

4 examples. Buena Vista, Guimaras Island.
January 14, 1909. Length 58 to 138 mm. Seine in
mouth of river.

22138 (D. 5461). Caringo Island (W.), h.
12° W., 4.9 miles (13° 57' 42" N., 123° 06'
42" E.). June 14, 1909. Length 199 mm.

8847, 9110, 9111, ~~9118 to 9120~~, ~~21158~~, Catbalogan,
Samar. April 15, 1908. Length ¹¹⁷~~75~~ to ¹⁶⁵~~185~~ mm.

~~22446. Cavite market. June 26, 1908.~~
~~Length 84 mm.~~

— Günther, Journ. Mus. Godeffroy,
 vol. 5, pt. 11, p. 133, pl. 86, 1876
 (Raiatea). — Peters, Monatsber.
 Akad. Wiss. Berlin, 1876, p. 440
 (Mauritius; Seychelles). — Day,
 Fishes of India, pt. 2, p. 214, pl. 50, fig. 3, 1876 (Andamans);
~~Macleay, Proc. Linn. Soc. New~~
~~Suppl. pt. 789, 1888; Fauna British India, Fishes, vol. 2,~~
~~South Wales, vol. 7, p. 335, 1882~~
~~p. 152, 1889.~~
 — Bryan and Herre,
 Occas. Pap. Bishop Mus., vol. 2,
 no. 1, p. 128, 1902 (1903) (Marcus Island).
 — Seale, Occas. Pap. Bishop Mus.,
 vol. 4, no. 1, p. 32, 1906 (Tubuai;
 Nukuhiva; Faté). — Steindachner,
 Sitzs. Akad. Wiss. Wien, math.-
 naturw. Kl., vol. 115, pt. 1, p. 1403,
 1906 (Upolu). — Jordan and Seale,
 Bull. Bur. Fisher., vol. 25, p. 230,
 1905 (1906) (Pago Pago). — Weber,
 Nova Guinea, vol. 5, pt. 2, p. 249,
 1908 (Klipang River, north New Guinea).

1553
Ost Asien, 1876, p. 390 (Yeddo; Yokohama;
Manila). $\frac{1}{m}$ Günther, Rep. Voyage
Challenger, vol. 1, 1880, p. 66 (Inland Sea
of Japan). $\frac{1}{m}$ Karoli, Termesz. Füzetek,
Budapest, vol. 5, 1881, p. 159 (Canton). $\frac{1}{m}$
Day, Fauna British India, vol. 2, 1889, p. 114.
 $\frac{1}{m}$ Boulenger, Proc. Zool. Soc. London, 1892, p.
135 (Muscat). $\frac{1}{m}$ Elera, Cat. Fauna Filipinas,
vol. 1, 1895, p. 501 (Manila; Luzon). $\frac{1}{m}$
Ishikawa and Matsuura, Prelimin. Cat.
Fishes Mus. Tokyo, 1897, p. 45. $\frac{1}{2}$ Zugmayer,
Abhandl. Kon. Bayer. Akad. Wiss., math.-
physik. Klasse, vol. 26, band 6, 1913, p.
12 (Meeran; Oman).
Johnius sinu Blyth, Journ. Asiatic Soc.
Bengal, vol. , 1860, p. 141 (Sitang River). $\frac{1}{m}$
Becker, Verhandl. Kon. Akad. Wetensch.
Amsterdam, vol. 14, 1874, p. 54 (copied). $\frac{1}{2m}$
Fowler, Proc. Acad. Nat. Sci. Philadelphia,
1925, p. 247 (Delagoa Bay); Journ. Bombay

— Regan, Ann. Natal Museum, vol. 1,
pt. 3, p. 246, May 15, 1908 (Kosi Bay,
Natal).

— Weber, Siboga Exped., vol. 57, p.
Fische, p. 397, 1913 (Celebes;
Karakelang; Salibabu).

— Gilchrist and Thompson, Ann. Durban
Mus., vol. 1, pt. 4, p. 386, May 21, 1917
(reference).

— Wakaya, Ann. Carnegie Mus., vol.
15, p. 192, 1924 (Ryukyu).

Meyer, Ann. Soc. Españ. Hist. Nat. Madrid,
vol. 14, 1885, p. 12 (north Celebes; Cebu).
— Gorgoza, Ann. Soc. Españ. Hist. Nat.
Madrid, vol. 17, 1888, p. 283 (Cebu). —
Day, Fauna Brit. India, vol. 1, 1889, p. 494.
— Jatzow and Lenz, Abhandl. Senckenberg.
Gesell., vol. 21, 1899, p. 500 (Zanzibar). —
Weber, Zool. Forschungsr. Austral. Semon,
vol. 5, 1895, p. 263 (Amboina). — Elera, Cat.
Fauna Filip., 1895, p. 470 (Cebu). — Stein-
dachner, Abhandl. Senckenberg. naturf.
Gesell., vol. 25, 1900, p. 416 (Ternate; Batjan;
Patani River, Halmahera).

Amia fasciata Bleeker, Atlas Ichth.
Ind. Néerl., vol. 7, 1873-76, p. 87 (Sumatra,
Batu, Lepar, Java, Cocos, Bawean, Bali,
Celebes, Sangir, Solor, Timor, Ternate,
Buru, Ceram, Amboina, Goram, Banda,
Diru, Luzon, Samar); op. cit., vol. 8,
1876-77, pl. (48) 326, fig. 4. — Evermann

— Barnard, Ann. South African
Mus., vol. 21, pt. 2, p. 544, Oct. 1927
(Zimbabwe).

Apogon fasciatus (non Shaw) Lucy and
Gaimard, Voy. Uranie, Zool., 1825, p. 344
(Guam). — ~~Peters, Arch. Naturgesch., 1855, p. 204 (Mozambique)~~ — Günther, Cat.
Fishes Brit. Mus., vol. 1, 1859, p. 241 (part).
— Kner, Reise Novara, Zool., vol. 1, pt. 5,
1865, p. 43 (Punipet, Tahiti, Hong Kong, Java).
— Playfair, Fishes of Zanzibar, 1866, p. 20
(Zanzibar and Joanna). — Peters, Monatsb.
Akad. Wiss. Berlin, 1868, p. 256 (Paracali,
Luzon; east of Lauang, Samar). —
Klunzinger, Verh. zool. bot. Gesell. Wien, vol.
20, 1870, p. 712 (Koseir, Red Sea). — Günther,
Journ. Mus. Godeffroy, vol. 1, pt. 1, 1873,
p. 19, pl. 20, fig. B (Society Islands; Kingmill
Islands; Apia). — Day, Fishes of India,
pt. 1, 1875, p. 60. — Martens, Preuss. Exped.
Ost-Asien, 1876, p. 386 (Amboina). —
Károli, Termesz. Füzetek, Budapest,
vol. 5, 1882, p. 152 (Nagasaki, Japan). —

— Kendall and Goldsborough,
 Mem. Mus. Comp. Zool., vol. 26, p.
~~267~~ 268, 1911 (Vavau, Tonga;
 Funafuti, Ellice Islands; Fakarava
 and Makemo, Paumotu; Borabora,
 Society Islands; Suva, Fiji
 Islands; Marshalls; Nukuhiva,
 Marquesas). — McCulloch, Mem.
 Queensland Mus., vol. 8, pt. 1, p. 70,
 pl. 11, fig. 2, January 30, 1924
 (type of Caranx moresbyensis). —
E. K. Jordan, Proc. U. S. Nat. Mus.,
 vol. 66, p. 15, 1925 (Honolulu). —
Whitley, Journ. Pan Pac. Res. Inst.,
 vol. 3, no. 1, p. 12, January-March
 1928 (Santa Cruz Islands). —
Herre, Journ. Pan Pac. Res. Inst.,
 vol. 6, no. 4, p. 10, October-December
 1931 (Moorea, Society Islands).

Cuv 29

Johnius sina (Cuvier)

Corvina sina Cuvier, Hist. Nat. Poiss.; vol. 5,
1830, p. 122, Pondichery, Malabar, Japan. $\frac{1}{2m}$
Valenciennes, Voyage Ind. Orient. Bélanger,
Zool., 1834, p. 351 (Malabar; Pondichery).
 $\frac{1}{2m}$ Richardson, Ichth. China Japan, 1846, p.
225 (China). $\frac{1}{2m}$ Bleeker, Verhandel. Batavia.
Genootsch. (Nalez. Ichth. Japan.), vol. 25,
1853, p. 12; (Nalez. Ichth. Bengal), vol. 25,
1853, p. 36; (Nalez. Ichth. Japan.), vol. 26,
1857, p. 82 (Nagasaki); Act. Soc. Sci. Ind.
Néerland., no. 3, vol. 3, 1857-58, p. 5 (Japan);
Verslagen Meded. Akad. Wetensch.
Amsterdam, ser. ~~1~~ 2, vol. 3, 1869, p. 238
(Jedo).

Sciaena sina Günther, Cat. Fishes Brit.
Mus., vol. 2, 1860, p. 292 (compiled). $\frac{1}{2m}$ Day,
Fishes of Malabar, 1865, p. 52; $\frac{1}{2m}$ Fishes of
India, pt. 2, 1876, p. 186, pl. 4, fig. 2
(Bombay; Sind). $\frac{1}{2m}$ Wartens, Preuss. Exped.

— Fowler, Mem. Bishop Mus., vol. 11,
no. 6, p. 404, 1934 (Santa Cruz
Island and Vaitupu, Ellice
Islands).

Martens, Preuss. Exped. Ost Asien, vol. 1, p. 391, 1876 (Amboina). —

Caranx melampygus Schmeltz, Cat.
Mus. Godeffroy, no. 7, p. 45, 1879
(Upolu; Tahiti). — Pöhl, Cat.
Mus. Godeffroy, no. 10, p. 31, 1884
(Upolu).

Caranx melampigus Elera, Cat. Fauna Filipinas, vol. 1,
p. 510, 1895 (Luzon; Manila; Masagba; Batangas).

Caranx (Caranx) melampygus Weber
and Beaufort, Fishes Indo-Austral.
Archip., vol. 6, p. 248, 1931 (North
New Guinea).

Bleeker, Res. Faune Madagascar, pt. 4, p. 99, 1874 (reference). —

Caranx melampygus Streets, Bull.
U. S. Nat. Mus., no. 7, p. 69, 1877
(Honolulu). — Jordan and Evermann,
Bull. U. S. Fish Comm., vol. 23, pt. 1,
p. 192, 1903 (1905) (Honolulu; Samoa).

1557

least depth of caudal peduncle $4\frac{1}{3}$;
pectoral $1\frac{2}{5}$; ventral $1\frac{1}{2}$.

Brown, paler to whitish below.
Membranes of dorsals deeper brownish
terminally. Iris whitish.

Borneo. Greatly like johnius soldado
but differing in the larger and more
slender caudal peduncle and greatly
smaller eye.

35720 U. S. N. M. Sandang River, North
Borneo. W. J. Hornaday. Length 505 mm.
This example skinned out.

Caranx (Caranx) melampygus

Klunzinger, Fische Roth. Meer.,

vol. 1, p. 99, 1884.

257

Amia novemfasciata Jordan and Seale,
Proc. U. S. Nat. Mus., vol. 28, 1906, p. 777
(Negros); Bull. Bur. Fisher., vol. 25, 1905
(1906), p. 242, figs. 36-37 (Pago Pago and
Apia). — Jordan and Richardson, Bull.
Bur. Fisher., vol. 27, 1907 (1908), p. 254
(Calayan, Cuyo, Ticao). — Radcliffe, Proc.
U. S. Nat. Mus., vol. 41, 1911, p. 251, pl. 23,
(Luzon, Celebes, Apia, Fiji). — Snyder,
Proc. U. S. Nat. Mus., vol. 42, 1912, p. 497
(Okinawa). — Fowler, Bishop Mus. Bull.,
no. 22, 1925, p. 8 (Guam).

Amia fasciata novemfasciata McCulloch,
Biol. Res. Endeavour, vol. 3, no. 3, 1915, p. 117
(Murray Island; Samoa; New Hebrides;
Tongatabu, Friendly Islands; Bougainville
Island, Solomons).

Caranx bixanthopterus Rüppell,
Neue Wirbelth. Fische, p. 49, 1835
(type locality, Djedda, Red Sea). —
Klunzinger, Verh. zool. bot. Gesell.
Wien, vol. 21, p. 464, 1871 (Red Sea).
— Wakiya, Ann. Carnegie Mus.,
vol. 15, p. 190, pl. 27, fig. 2, 1924
(Kii; Uwajima; Nagasaki; Bonin
Islands; Ryukyu).

1549
Cuv. 29

Johnius polycladiscus (Bleeker)
Corvina polycladiscus Bleeker, Natuurk.
Tijdschr. Nederland. Indië, vol. 3, 1852,
p. 420. Banjermasin, Borneo.

Corvina polycladiscus Günther, Cat. Fishes
Brit. Mus., vol. 2, 1860, p. 301 (compiled).

Pseudosciaena polycladiscus Bleeker,
Verhandel. Kon. Akad. Wetensch. Amsterdam,
series 3, vol. 14, 1874, p. 29 (Borneo); Atlas
Ichth. Ind. Néerland., vol. 9, 1877, pl. (1)
384, fig. 1.

Depth 3; head $3\frac{1}{5}$, width $2\frac{1}{8}$. Snout $3\frac{2}{3}$
in head; eye 9, $2\frac{1}{5}$ in snout, $2\frac{1}{8}$ in
interorbital; maxillary reaches $\frac{1}{2}$ in eye,
expansion slightly greater than eye,
length $2\frac{7}{8}$ in head; jaws even in front,
chin with 4 slit like pores; teeth in
villiform bands in jaws, upper outer row
slightly enlarged, likewise inner lower
row, though less so; interorbital 4, broadly

Caranx forsteri (not Cuvier) Jordan
and Evermann, Bull. U. S. Fish
Comm., vol. 23, pt. 1, p. 191, 1903 (1905)
(part).

Caranx forsteri Jordan and Seale,
Bull. Bur. Fisher., vol. 25, p. 230,
1905 (1906) (part).

Amia novemfasciata (Cuvier)

Apogon novemfasciatus Cuvier, Hist. Nat. Poiss., vol. 2, 1828, p. 154. Timor and Guam.
— Richardson, Ichth. China Jap., 1846, p. 221 (China). — Peters, Arch. Naturgesch., 1855, p. 234 (Mozambique). — Fowler, Journ. Acad. Nat. Sci. Phila., ser. 2, vol. 12, 1904, p. 519 (Padang, Sumatra); Proc. Acad. Nat. Sci. Phila., 1906, p. 527 (Padang material). — Beaufort, Bijdr. Dierk., Amsterdam, 1913, p. 114 (Saonek, Waigiu). — Weber, Siboga Exped., vol. 65, 1913, p. 224 (Savu; Sanghisiapo, Sulu Archipelago; Menado; Biaru; Karakelang; Habibabuw; north Ceram; Salayer; Nusa Laut; Tuir; High Key; Roma; Timor, Rotti). ^{57, Fish}

Caranx moresbyensis Macleay, Proc. Linn. Soc. New South Wales, vol. 7, p. 358, 1882 (type locality, New Guinea).

Carangus latus (not Agassiz) Jenkins, Bull. U. S. Fish Comm., vol. 22, p. 444, 1902 (1903) (part).

Carangus lugubris (not Foey) Seale, Occas. Pap. Bishop Mus., vol. 4, no. 1, p. 321, 1906 (Rarotonga; Shortland; Tahiti; Mukuhiwa).

Caranx ascensionis (not Osbeck) Fowler, Mem. Bishop Mus., vol. 10, p. 145 (not figure), 1928 (Oceania materials); vol. 11, no. 5, p. 326, 1931 (part).

? Caranx ishikawai Waksya, Ann. Carnegie Mus., vol. 15, p. 193, pl. 26, 1924 (type locality, Bonin Islands; Formosa).

Depth $3\frac{1}{5}$ to $3\frac{1}{4}$; head $2\frac{1}{5}$ to 3, width 2. Snout $3\frac{1}{5}$ to $3\frac{3}{5}$ in head; eye $4\frac{7}{8}$ to $5\frac{1}{4}$, $1\frac{1}{5}$ in snout, $1\frac{2}{5}$ in interorbital; maxillary reaches opposite hind pupil edge, length $2\frac{1}{5}$ to $2\frac{1}{4}$ in head; narrow band of fine jaw-teeth, outer upper row enlarged and lower inner row slightly enlarged and close set; interorbital $3\frac{2}{3}$ to $3\frac{4}{5}$, broadly convex. Gill rakers 8+12, lanceolate.

Scales 47 or 48 in lateral line to caudal base; 7 above, 7 or 8 below, 32 predorsal. Scales with 9 to 11 basal radiating striae; 56 to 63 apical denticles, with 10 to 12 transverse rows of basal elements; circuli very fine.

D. XI, 27, I, third spine $1\frac{7}{8}$ to 2 in head, first ray 3 to $3\frac{1}{8}$; A. II, 8, I, second spine 3 to $3\frac{3}{4}$, third ray $2\frac{1}{10}$ to $2\frac{1}{3}$; caudal $1\frac{1}{3}$ to $1\frac{1}{2}$, obtuse behind;

Depth $2\frac{1}{2}$ to $2\frac{2}{3}$; head 3 to $3\frac{1}{5}$, width $2\frac{2}{5}$ to $2\frac{3}{5}$. Snout $2\frac{3}{4}$ to $3\frac{1}{8}$ in head from snout tip; eye $3\frac{3}{4}$ to $4\frac{4}{5}$, $1\frac{1}{8}$ to $1\frac{3}{4}$ in snout, $1\frac{1}{8}$ to $1\frac{1}{2}$ in interorbital; maxillary reaches $\frac{1}{8}$ to $\frac{1}{5}$ in eye, expansion $1\frac{1}{5}$ to $1\frac{4}{5}$ in eye, length $2\frac{2}{5}$ to $2\frac{1}{2}$ in head from snout tip; interorbital $3\frac{1}{5}$ to $3\frac{2}{5}$, convexly elevated with median keel. Gill rakers 8 + 17, lanceolate, equals gill filaments or $1\frac{1}{4}$ in eye.

Scales 37 or 38 + 35 to 37 in lateral line, arch $1\frac{1}{3}$ to $1\frac{3}{4}$ in straight section; 17 or 18 above arch to soft dorsal origin, 22 or 23 below. Breast and chest completely scaled.

d. I, VIII - I, 23, I or I, 24, I.

third spine 2 to $2\frac{1}{6}$ in total head length, first branched ray $1\frac{2}{5}$ to 2; A. II - I, 18, I, to I, 20, I, first branched ray $1\frac{3}{4}$ to $2\frac{1}{3}$; caudal $1\frac{1}{5}$ to $1\frac{1}{6}$, deeply forked; least depth of caudal peduncle 7 to $8\frac{1}{4}$; ventral $2\frac{1}{5}$ to $2\frac{4}{5}$, rays I, 5; pectoral II, 18, fin 3 in fish without caudal, $1\frac{1}{5}$ in head in young.

Back brown, sides and below silvery white. Iris gray white. Vertical fins brownish, lobes of soft dorsal and anal dusky to blackish brown terminally. Paired fins pale to whitish, pectorals bright yellow in life.

Caranx ishikawai Wakuija agrees in many ways with the present species, though differs in the larger and fewer scutes but 30, also its long dorsal and anal lobes subequal with the head.

Red Sea, Zanzibar, Zululand, Natal, Mauritius, Seychelles, Andamans, East Indies, Formosa, Riu Kiu, Philippines, Japan, Melanesia, Micronesia, Polynesia, Hawaii.

1536

22088, 22090. Abuyog, Leyte.
July 26, 1909. Length 85 to 125 mm.
A. II - I, 19.

20405. Batangas market.
June 7, 1908. Length 102 mm.
A. II - I, 19.

5746, 14072 to 14075. Capunypugan,
Mindanao. May 9-10, 1908. Length
79 to 698 mm.

7517, 7518. Chase Head, Endeavour
Strait, Palawan. December 22, 1908.
Length 258 to 288 mm.

7564, 7569, 7688, 7689. Endeavour
Strait, Palawan. December 23, 1908.
Length 250 to 313 mm.

6035. Hinunangan Beach,
Leyte. July 30, 1909. Length 95 mm.
A. II - I, 19.

A. 1342. Labuan Blanda Island.
December 14, 1909. Length 326 mm.

Bombay and Gwadar; Fauna British India, ^{Fishes} vol. 2, 1889, p. 112. $\frac{1}{3}$ Lloyd, Records Indian Museum, vol. 1, 1907, p.

226 (Chyab). $\frac{1}{3}$ Pearson, Ceylon Administr. Rep., 1914, p. E7; 1915-18, p. F13.

Sciaena (Pseudosciaena) bleekeri Steindachner

and Döderlein, Denkschr. Akad. Wiss.

Wien, math.-naturw. Klasse, vol. 48, pt. 1, 1884, p. 33 (Japan).

Pseudosciaena schlegelii Bleeker, Verhand.

Kon. Akad. Wetensch. Amsterdam, vol. 18, 1879, p. 9. Nagasaki.

Sciaena (Pseudosciaena) schlegelii Steindachner

and Döderlein, Denkschr. Akad. Wiss.

Wien, math.-naturw. Klasse, vol. 48, pt. 1,

1884, p. 33 (Tokyo). $\frac{1}{3}$ Jordan and Thompson,

Proc. U.S. Nat. Mus., vol. 39, 1911, p. 254 (Tokyo,

Onomichi, Suruga, Kaitan, Hiroshima,

12328. Luzon shore San Vicente
Harbor. November 13, 1908. Length
174 mm. $\overline{\text{A. II}} - \overline{\text{I}}, 19$.

8512. Makese Island, Palawan.
April 5, 1909. Length 295 mm.

21173. Malcochin Harbor,
Linaoapan Island. December 1908.
Length 105 mm. $\overline{\text{A. II}} - \overline{\text{I}}, 19$.

20855. Manalaya, Mindoro.
June 4, 1908. Length 73 to 95 mm.
Five examples. $\overline{\text{A. II}} - \overline{\text{I}}, 18 \text{ or } 19$.

8483, 8681. Mantaguin Bay,
Palawan. April 2, 1909. Length
248 to 450 mm. Soft dorsal of larger
with filament reaching $\frac{3}{4}$ of fin
and $\overline{\text{A. II}} - \overline{\text{I}}, 18$.

Four examples. Mati, Puyada
Bay, Mindanao. May 15, 1908. Length
74 to 109 mm.

9353. Murcielagos Bay, Mindanao.
April 21, 1909. Length 375 mm.

Sciaena japonica Schlegel, Fauna
japonica, Poiss., pts. 2-4, 1843, p.
58, pl. 24, fig. 1. South west coast of
Japan. ¹/₂₇ Jordan and Thompson, Proc.
U. S. Nat. Mus., vol. 39, 1911, p. 260 (copied).

¹/₂₇ Jordan and Metz, Mem. Carnegie
Mus., vol. 6, no. 1, June 1913, p. 35, pl. 7,
fig. 1 (Chinnampo, Fusan, Seoul).

Pseudosciaena japonica Jordan and Snyder,
Annotat. Zool. Japon., vol. 3, 1901, p. 81
(Yokohama; Nagasaki).

Sciaena mi-iuy Basilewsky, Nov.
Mém. Soc. Nat. Moscou, vol. 10, 1855, p.
22. Hari meridiano; Peking.

Sciaena bleekeri (not Pseudolithus
bleekeri Steindachner 1866) Day, Fishes of
India, pt. 2, 1876, p. 185, pl. 45, fig. 4.

13952. Palawan Bay, Mindoro.¹⁵³⁸
December 11, 1908. Length 105 mm.
A. II - I, 19.

13951, 13953, 13954, 13819, 13822,
19566. Palawan Bay, Mindoro.
December 11, 1908. Length 84 to 151
mm.

19474. Panguaron River, Port
Calton. December 16, 1908. Length
182 mm. A. II - I, 19.

One example, Philippines. Length
66 mm. A. II - I, 19.

7756, 7757. Port Ciego, Balabac.
January 3, 1909. Length 262 to 264 mm.

2, 1648. Port Jamelo, Luzon.
July 13, 1908. Length 62 to 104 mm.
A. II - I, 18 or 19.

8536. Port Langcan, Sumaran
Island. April 8, 1909. Length 255 mm.
Five examples. Port San Pio
Lunto, Camaguin Island. March 11,
1908. Length 71 to 90 mm.

over 179

6577

Johnius argentatus (Houttuyn)

Sparus argentatus Houttuyn, Verhand.
Holland. Maatsch. Haarlem, vol. 20, 1782,

p. 319. Japan. [Not Sciaena argentata

Gmelin 1789 which a Lutjanus.]

Corvina argentata Valenciennes, Hist. nat.

Poiss., vol. 5, 1830, p. 115 (on Houttuyn).

Corvula argentata Jordan and Evermann,

Proc. U. S. Nat. Mus., vol. 25, 1903, p. 351

(^{no} Formosa). $\frac{1}{21}$ Smith and Pope, Proc. U.

S. Nat. Mus., vol. 31, 1906, p. 478 (Kochi).

Sciaena argentata Jordan and Thompson,

Proc. U. S. Nat. Mus., vol. 39, 1911, p. 252

(copied). $\frac{1}{22}$ Yanaka, Fishes of Japan, vol.

44, December 13, 1928, p. 870, pl. 180, fig. 491

(Tokyo).

7039, 13481. Port San Pio duinto.
November 10, 1909. Length 163 to
195 mm. A. II - I, 19.

6580, 6581, 6585 to 6590. Port San
Vicente. November 18, 1908. Length
⁵⁸ to 112 mm. A. II - I, 18 or 19.

18747. Pratas Reef. October
25, 1908. Length 158 mm. ~~Length~~
A. II - I, 19.

8978. Rapu Rapu Island.
June 22, 1909. Length 275 mm.

7068. San Roque, Leyte. July
29, 1909. Length 130 mm. A. II - I, 19.

20893. Santiago River, Pagapas
Bay, Luzon. February 20, 1909. Length
77 mm. A. II - I, 19.

7120. San Vicente Harbor.
November 13, 1908. Length 444 mm.

9310. Silino Island, northern
Mindanao. August 10, 1909. Length
410 mm.

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spines burnished with silvery white.

Mozambique, Madagascar, India, Ceylon, Pinang, East Indies, Philippines, Indo China, China, Greenland. Barnard says "It is doubtful whether Fowler's description applies to the true soldado. He gives the number of gill rakers as 15, and there are several other points of difference between his description and those of Day and Ogilby". This is somewhat misleading as in the gill rakers the rudiments are included in the count, my materials surely agree in their specific characters and are within the range of variation for the species.

20749. Sbatie Island, Borneo. October 1, 1909. Length 211 mm.

18304 to 18307. River at Macassar, Celebes.

December 26, 1909. Length 208 to 224 mm.

52985 A.N.S. off Bombay. Prof. F.

Hallberg. 1923. Length ~~192~~ 193 mm.

A 555. Sulade Island, vicinity ¹⁵⁴⁰ of Jolo. September 17, 1909. Length 580 mm.

A 539, A 540. Tulayan Island, vicinity Jolo. September 15, 1909. Length 415 to 615 mm.

A 471. Tuhahutan Island, east of Zamboanga. September 9, 1909. Length 368 mm.

A 966. Binang Buang Island, Celebes. November 17, 1909. Length 374 mm.

A 1451, A 1452. Kait Point, Libani Bay, Celebes. December 29, 1909. Length ⁴¹⁸ ~~374~~ to 495 mm.

A 893, A 895, A 896, ^{12790.4} Limbe Strait, Celebes. November 10, 1909. Length ¹⁷⁸ ~~220~~ to 345 mm.

A 913. Limbe Strait. November 11, 1909. Length 280 mm.

caudal largely covered with fine scales. Scales with 9 to 12 basal radiating striae; 45 to 47 apical denticles, with 12 or 13 transverse series of basal elements; circuli fine.

D. X, I, 29, I or 30, I, third spine $1\frac{3}{5}$ to $1\frac{7}{8}$ in head, first ray $2\frac{2}{3}$ to $2\frac{4}{5}$; A. II, 7, I, second spine $1\frac{4}{5}$ to $2\frac{1}{8}$, first ray $1\frac{3}{4}$ to $1\frac{4}{5}$; caudal $1\frac{1}{4}$ to $1\frac{2}{5}$, cuneate; least depth of caudal peduncle $3\frac{1}{5}$ to $3\frac{1}{4}$; pectoral $1\frac{1}{2}$ to $1\frac{3}{5}$; ventral $1\frac{1}{2}$ to $1\frac{3}{5}$.

Drab or lavender brown above, below whitish, most everywhere with silvery white reflections. Iris whitish. Dorsals and caudal pale brownish, membranes of former dusky though each with dark basal spot to spine or ray and subbasally on soft dorsal pale broad area whole length of fin. Front anal rays little darker than rest of fin. Otherwise fins whitish, most all

22821. Gane Road, Gillolo.
December 1, 1909. Length 202 mm.
[2097.] A. II - I, 18.

A 729, A 730, A 720. Danawan Island,
Borneo. September 27, 1909. Length
320 to 360 mm.

A 850. Taleise Island. November
9, 1909. Length 220 mm.

A 1409. Tampotana Island.
December 21, 1909. Length 252 mm.

5282. Sandakan Bay, Borneo.
March 21, 1908. Length 83 mm.
A. II - I, 19.

A 691. Si Amil Island, Borneo.
September 26, 1909. Length 342
mm.

① 3754. Data not found.
Length 518 mm.

Depth 3 to $3\frac{1}{8}$; head $3\frac{1}{4}$ to $3\frac{1}{3}$, width $2\frac{1}{8}$ to $2\frac{1}{4}$. Snout $3\frac{2}{3}$ to $3\frac{3}{4}$ in head; eye $4\frac{7}{8}$ to $5\frac{1}{2}$, $1\frac{1}{4}$ to $1\frac{1}{3}$ in snout, 1 to $1\frac{1}{4}$ in interorbital; maxillary reaches $\frac{4}{5}$ in eye, expansion $1\frac{2}{5}$ in eye, length $2\frac{1}{3}$ in head; jaws even or lower trifle shorter; narrow bands of villiform teeth in jaws, outer upper and inner lower little enlarged; interorbital $4\frac{3}{4}$ to $4\frac{7}{8}$, broadly convex; preopercle edge denticulate. Gill rakers 7+13, lanceolate, equal gill filaments or $1\frac{2}{5}$ in eye; 3 or 4 above and below rudimentary.

Scales 50 in lateral line to caudal base and 25 more out over caudal fin; 9 above, 10 below; 24 predorsal scales to occiput and 23 more forward to snout tip; 16 rows across cheek; soft dorsal and anal with fine scales in basal sheaths and few others on membranes basally;

U. S. N. M., no. 6265. Bonin Islands.
William Stimpson. Length 144 mm.
A. I, 19.

U. S. N. M., no. 19237. Fanning Islands.
Dr. J. H. Streets. Length 408 mm.

U. S. N. M., no. 17980. Honolulu.
Dr. J. H. Streets. Length 115 to 205 mm.
A. I, 19.

U. S. N. M., no. 30546. New Guinea.
Australian Museum. Length 205 mm.
A. I, 19.

U. S. N. M., no. 38248. Apia, Samoa.
Dr. Wm. H. Jones. Length 68 to 118 mm.
Five examples. A. I, 18 or 19.

U. S. N. M., no. 38281. Papeete, Tahiti.
Dr. Wm. H. Jones. Length 87 to 100 mm.
Three examples. A. I, 19.

U. S. N. M., no. 45088. Samoa.
Lord Lilford. Length 104 to 110 mm.
Two examples. A. I, 19.

1774
side of chest; third band from
longest dorsal spine close behind
ventral base; fourth band from
front of soft dorsal to front of soft
anal; fifth across caudal peduncle;
in pale areas narrower dark transverse
bands alternating, with age further
dark streak or line may also eventuate
in narrower pale areas. Caudal with
upper and lower edges, together with
base, dark brown. Ventrals blackish
brown. Fins, except as otherwise noted,
very pale or light brown.

Queensland, New South Wales, Victoria,
South and West Australia.

U. S. N. M., No. 41556. Samoa. Dr.
C. H. White. Length 86 to 122 mm.
Two examples. A. I, 19.

U. S. N. M., No. 52360. Apia, Samoa.
Bureau of Fisheries. Length 207 to 280
mm. Three examples. A. I, 19 or 20.
As Caranx forsteri.

U. S. N. M., No. 52771. Hawaiian Islands.
Bureau of Fisheries (04056). Length
265 mm. A. I, 19. As Caranx forsteri.

U. S. N. M., No. 55084. Hawaiian Islands.
Albatross Collection (2665). Length 248 mm.
A. I, 18. As Caranx latus.

U. S. N. M., No. 55423. Hilo, Hawaiian
Islands. Bureau of Fisheries. Length
92 mm. A. I, 20. As Caranx latus.

U. S. N. M., No. 55367. Hawaiian Islands.
Bureau of Fisheries (1361). Length 110 mm.
As Caranx forsteri.

U. S. N. M., No. 65774. Vavau, Tonga.
Albatross Collection. Length 74 to 268 mm.
Twelve examples. A. I, 19.

base; A. III, 13, I, to 15, I, third spine
2 to $2\frac{1}{3}$ in total head length, first
ray 1 to $1\frac{3}{5}$; caudal 1, emarginate;
least depth of caudal peduncle $2\frac{2}{5}$ to $3\frac{1}{8}$;
pectoral 1 to $1\frac{1}{5}$; ventral spine $1\frac{2}{5}$, fin
 $2\frac{1}{2}$ in combined head and body to caudal
base.

Back gray brown, sides and below
paler to whitish. Five broad, deep
brown transverse bands; first from
occiput or front predorsal forward to
eye and down over cheek to lower
preopercle ridge, less than eye in
width; second band from base before
spinous dorsal origin over opercle or

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U. S. N. M., No. 65775. Nukuhiva,
Marquesas. Albatross Collection.
Length 95 to 215 mm. 15 examples.
A. I, 18 to I, 20.

U. S. N. M., No. 65776. Marshall
Islands. Albatross Collection (09087).
Length 75 mm. A. I, 19.

U. S. N. M., No. 65778. Suva, Fiji.
Albatross Collection (08829). Length
210 mm. A. I, 20.

U. S. N. M., No. 65779. Makemo, Pamotu.
Albatross Collection (05856). Length 127
mm. A. I, 18.

U. S. N. M., No. 65780. Funafuti, Ellice
Islands. Albatross Collection (08979).
Length 98 mm. A. I, 19.

U. S. N. M., No. 65782. Funafuti, Ellice
Islands. Albatross Collection. Length
168 mm. A. I, 19. As Caranx forsteri.

U. S. N. M., No. 75893. Bandjeng Satebah,
Borneo. March 23, 1913. H. C. Raven.
Length 173 to 238 mm. 3 examples.

lanceolate, subequal to little longer than gill filaments or $2\frac{1}{4}$ to $2\frac{1}{2}$ in eye.

Scales 66 to 73 in lateral line to caudal base and 6 to 8 more on latter; tubes $5\frac{1}{2}$ or $5\frac{3}{4}$ in lateral line to caudal base and 3 to 5 more on latter; 15 scales above, 30 to 32 below between beginning of hind posterior horizontal section of lateral line and anal origin; 20 to 24 predorsal to occiput, 9 rows on cheek to preopercle ridge. Scales with 6 or 7 basal radiating striae; circuli moderately fine.

D. VIII — I, 15, I, fourth spine 1 to $1\frac{1}{8}$ in total head length, first ray 2 to $2\frac{1}{8}$ in combined head and body to caudal

U. S. N. M., No. 85111. Hanalei River,
Hawaii. Albatross Collection. Length
90 to 170 mm. A. I, 19. As Carangus
latus.

U. S. N. M., one example. Funafuti,
Ellice Islands. Length 94 mm.
Albatross Collection. A. I, 20.
Senter 35. As Caranx forsteri.

A. N. S. P., two examples. Philippines.
1923. Rev. Joseph Clemmens. Length 165
to 185? mm.

Depth $1\frac{7}{8}$ to 2; head $2\frac{3}{5}$ to 3, width
 $2\frac{2}{3}$ to $2\frac{3}{4}$. Snout $3\frac{2}{3}$ to $4\frac{1}{3}$ in head
from snout tip; eye $3\frac{1}{4}$ to 4, greater
than snout in young to subequal with
age, greater than interorbital; maxillary
reaches to or $\frac{1}{8}$ in eye, expansion 2 to
 $2\frac{2}{5}$ in eye, length 3 to $3\frac{1}{4}$ in head
from snout tip; interorbital $5\frac{1}{5}$ to $5\frac{3}{4}$,
very slightly convex; preopercle edge
strongly denticulate, those on lower edge
turned backward of which 2 at angle
somewhat enlarged and point upward;
usually 5 denticles on lower preorbital
edge, posterior usually largest and
points back. Gill rakers 6 to 8 + 18 to 20,

Caranx stellatus Eydoux and Souleyet

Caranx stellatus Eydoux and Souleyet,
 Voy. Bonite, Zool., vol. 1, p. 167, pl. 3,
 fig. 2, 1841 (type locality, Hawaiian
 Islands) — Jouan, Mém. Soc. Sci. Nat. Cherbourg, vol. 17, p. 91, 1873.
Jordan and Jordan,
 Mem. Carnegie Mus., vol. 10, no. 1, p. 40,
 December 1922 (Honolulu). — E. K.
Jordan, Proc. U. S. Nat. Mus., vol.
 66, p. 15, 1925 (Hawaii). — Jordan,
Evermann, Tanaka, Proc. Cal. Acad.
 Sci., ser. 4, vol. 16, p. 655, November 14,
 1927 (Honolulu). — McCulloch, Austral. Mus. Mem., no. 5, pt. 2, p. 187, fig. 10, 1929 (reference).
Here,
 Journ. Pan Pac. Res. Inst., vol. 6, no. 4,
 p. 5, Oct.-Dec. 1931 (Hathorne Sound
 and Tenibuli, Solomons; p. 12
 New Hebrides); vol. 7, no. 1, p. 4,
 Jan.-March 1932 (Tahiti).

no. 29

1703

Sillago boutani Pellegrin

Sillago boutani Pellegrin, Bull. Soc.
Zool. France, vol. 30, 1905, p. 86. Baie
de Fatan, Alang.

Depth 7; head $2\frac{7}{8}$. Eye 7 in head, 3
in snout, $1\frac{1}{2}$ in interorbital. Teeth
villiform. Preopercle denticulate. Scales
74 in lateral line, 5 above, $1\frac{1}{2}$ below to
middle of belly, strongly ciliated; 3
rows on cheek. D. XI, I, 21; A. II, 22;
caudal subtruncate; caudal peduncle depth
 $1\frac{1}{2}$ its length; pectoral $1\frac{1}{2}$ in head.
Yellowish olive on back, pale on sides and
abdomen. Jaws and opercles with orange
yellow. Two orange yellow lines along
flanks. Fins uniformly gray. Some
traces of punctuations on first dorsal
rays. Length 180 mm. (Pellegrin)
Indo China.

— Fowler, Mem. Bishop Mus., vol. 11,
 no. 6, p. 404, 1934 (New Hebrides;
 Tongatabu; Samoa); ?Proc. Acad.
 Nat. Sci. Philadelphia, vol. 86, 1934,
 p. 444 (note on Delagoa Bay specimens).

Caranx (Caranx) stellatus Weber and
Beaufort, Fishes Indo Austral.
 Archip., vol. 6, p. 253, ^{fig. 48,} 1931 (compiled).

~~1752~~
2 examples. A. N. S. P. Orani, Bataan
Province, Luzon. April 28, 1923. Rev.
Joseph Clemens. Length 124 to 174 mm.

1 example. A. N. S. P. Vigan, Ilocos
Sur, Luzon. February 6, 1923. Rev.
Joseph Clemens. Length 125 mm.

5 examples. A. N. S. P. Santa Maria,
Ilocos Sur, Luzon. January 28, 1923.
Rev. Joseph Clemens. Length 89 to 110 mm.

2 examples. A. N. S. P. San Fernando Bay,
San Juan, Luzon. February 23, 1923. Rev.
Joseph Clemens. Length 86 to 110 mm.

Caranx caeruleoprinnatus (not Rüppell)
Cuvier, Hist. nat. Poiss., vol. 9, p. 90,
 1933 (New Guinea). — Sauvage, Hist.
 Madagascar, Poiss., p. 331, 1891.

Caranx punctatus (not Agassiz)
 (Quoy and Gaimard) Cuvier, Hist. nat.
 Poiss., vol. 9, p. 90, 1933 (name in text).
 — Bleeker, Verh. Batavia, Genoot.
 (nat. Ich. Bengal.), vol. 25, p. 44, 1853.

Caranx melampygus (not Cuvier)
Günther, Journ. Mus. Godeffroy, vol.
 5, pt. 11, p. 133 (not plate), 1876
 (part). — Day, Fishes of India, pt. 2,
 p. 214, 1876 (part). — Macleay,
 Proc. Linn. Soc. New South Wales,
 vol. 7, pt. 3, p. 355, 1882 (New Guinea).
 — Jordan and Seale, Bull. Bur.
 Fisher., vol. 25, p. 230, 1905 (1906)
 (part). — McCulloch, Mem. Queensland
 Mus., vol. 8, pt. 1, p. 70, Jan. 30, 1924
 (part).

4707

72692 U.S.N.M. Java. Bryant
and Palmer. Length 133 mm.

84181 U.S.N.M. Philippines.
Dr. F. Baker. Length 122 mm.

27781 and 27782 A.N.S.P. Padang, Sumatra.
A.C. Harrison and H. M. Miller. Length 123
to 173 mm.

47458 to 47471 A.N.S.P. Philippines.
Commercial Museum of Philadelphia.

52855 A.N.S.P. Santa Maria, Luzon. January
26, 1923. Rev. Joseph Clemens. Purchased.
Length 80 mm.

53058 A.N.S.P. Durban beach, Natal. 1927.
H. W. Bell Marley. Length 142 mm.

53100 A.N.S.P. Durban beach. June 23, 1923.
H. W. Bell Marley. Length 136 mm.

53166 and 53167 A.N.S.P. Bombay, India.
1924. Prof. F. Hallberg. Length 98 to 162 mm.

Carangus melampygus Jordan
and Evermann, Bull. U. S. Fish
Comm., vol. 23, pt. 1, p. 192, 1903
(1905) (part).

? Caranx fishikawai Wakaya

and Seale, Bull. Bur. Fisher., vol. 26, 1906
(1907), p. 72 (Bacon and Samoa). — Seale
and Bean, Proc. U. S. Nat. Mus., vol. 33,
1907, p. 24 (Zamboanga).

Apogon (Amia) fasciatus Klunzinger,
Fische Roth. Meer., 1884, p. 20.

Amia balinensis Bleeker, Verh. Batav.
Genootsch. (Percoid.), vol. 22, 1849, p. 28.
Boeling, Bali Island.

Apogon purpur Thollière, Fauna Wood-
lark, 1857, p. 143. Woodlark Island.

Apogon melanotaenia Regan, Journ.
Bombay Nat. Hist. Soc., vol. 16, no. 2, 1905,
p. 321, pl. 3 (c.) fig. 4. Charkar, Makran
Coast; Karachi; Nicobars; Zanzibar. —

Regan, Ann. Durban Mus., vol. 1, pt. 5, 1917,
p. 458 (Durban). — Barnard, Ann. South Afr. Mus.,
vol. 21, 1927, p. 519 (Natal coast, 0 to 33 fathoms).

Amia melanotaenia Van Bende, Fisher.
Marine Biol. Surv. South Africa, Rep.
no. 3, 1922 (1924), p. 13 (off South Africa).

Caranx sansum (not Forsk.) Fowler,
Proc. Acad. Nat. Sci. Philadelphia,
vol. 77, 1925, p. 216 (Delagoa Bay).

Caranx ascensionis (not Osbeck) Fowler,
Mem. Bishop Mus., vol. 10, p. 145 (not
figure), 1928 (part).

1706

32695 U.S.N.M. Indian Archipelago.
Leiden Museum. Length 257 mm.

30683 U.S.N.M. New Guinea.
Australian Museum. Length 266 to 279 mm.
2 examples.

49324 U.S.N.M. Red Sea. Bellotti.
Length 172 mm?

49804 U.S.N.M. Tokyo, Japan.
Albatross Collection. Length 181 mm.

51508 U.S.N.M. Korea. Dale and Jouy.
Length 134 mm.

51989 U.S.N.M. Negros, Philippines.
Dr. Bashford Dean. Length 52 to 191 mm.
4 examples.

56296 U.S.N.M. Cavite. George A. Lund.
Length 104 to 145 mm. 3 examples.

59669 U.S.N.M. Yamagawa, Japan.
Dr. H. M. Smith. Length 111 mm.

72276 U.S.N.M. Aparri, Philippines.
R. C. MacGregor. Length 96 to 110 mm. 2 examples.

Depth $2\frac{1}{2}$ to $2\frac{3}{4}$; head $3\frac{1}{8}$ to $3\frac{1}{3}$, width $2\frac{1}{8}$ to $2\frac{1}{4}$. Snout $2\frac{3}{5}$ to $2\frac{4}{5}$ in head from snout tip; eye $4\frac{2}{5}$ to $6\frac{3}{5}$, $1\frac{3}{4}$ to $2\frac{3}{4}$ in snout, $1\frac{1}{4}$ to $1\frac{3}{4}$ in interorbital, adipose lids over last third of eye; maxillary reaches $\frac{1}{4}$ to $\frac{2}{5}$ in eye, expansion 1 to $1\frac{1}{3}$ in eye, length $2\frac{1}{2}$ to $2\frac{3}{5}$ in head from snout tip; interorbital $3\frac{1}{3}$ to $3\frac{3}{4}$, elevated convexly. Gill rakers $9 + 18$, lanceolate, equals gill filaments or $1\frac{1}{3}$ to $1\frac{2}{5}$ in eye.

Scales 44 to $46 + 33$ to 35 in lateral lines; 19 or 20 scales above arch of lateral line to soft dorsal origin, 30 to 32 below. Arch of lateral line $1\frac{1}{3}$ to $1\frac{1}{2}$ in straight section.

Breast and chest completely sealed.

D. I, VIII - I, 20, I to I, 23, I, fourth spine $2\frac{1}{10}$ to 3 in total head length, first branched ray $1\frac{1}{4}$ to $1\frac{1}{2}$; A. II - I, 19, I or I, 20, I, second spine 6 to $6\frac{1}{2}$, first branched ray $1\frac{3}{5}$ to $2\frac{1}{10}$; caudal $1\frac{1}{8}$ to $1\frac{1}{5}$, forked; ventral $2\frac{1}{8}$ to $2\frac{2}{5}$, rays I, 5; pectoral little longer than head, reaches little beyond angle of lateral line, length $2\frac{4}{5}$ to $2\frac{7}{8}$ in fish without caudal.

Back brown, below silvery white. Sides, especially above, with small, scattered, irregular black spots or dots. Iris gray. Opercle without dark spot. Spinous dorsal

dark brown. Soft dorsal
pale basally, lobe black
above and fin gray marginally.
Paired fins pale brownish,
ventral more or less dark
or dusky.

Delagoa Bay, Madagascar,
India, East Indies, Melanesia,
Polynesia, Cocos Island.

U. S. N. M., No. 50073. Cocos
Island. Stanford Expedition.
Length 428 mm. As Caranx
melampygus. A. I, 19, I. Body
well spotted with black, color
dark. Soft dorsal and hind edge
of upper caudal lobe narrowly
whitish.

U. S. N. M., No. 55085. Hawaiian
Islands. Bur. of Fisheries (2707,
2708). Length 264 to 268 mm. Two
examples. As Caranx marginatus.

U. S. N. M., two examples. Vavau, Tonga
Islands. Albatross Collection (A. 124,
A. 127). Length 293 to 330 mm.

? A. N. S. P., one example. Delagoa Bay,
Portuguese East Africa. 1922. H. W.
Bell Marley. Length 179 mm. A. I, 16, I.

33163 A.N.S.P. Toronto, Victoria.
Mrs. Agnes F. Kenyon. Length 167 mm.

1555

Caranx xanthopygus ^{Cuvier} ~~Valenciennes~~

Caranx xanthopygus ^{Cuvier} ~~Valenciennes~~,
Hist. nat. Poiss., vol. 9, p. 82, 1833
(type locality, Mauritius). —

Wakiya, Ann. Carnegie Mus., vol. 15,
p. 186, pl. 24, fig. 3, July 1, 1924
(Tosa; Ryukyu; Formosa). —

E. K. Jordan, Proc. U. S. Nat. Mus.,
vol. 66, p. 16, 1925 (note). —

Fowler, Proc. Acad. Nat. Sci.

Philadelphia, vol. 86, 1934, p. 446,
fig. 25 (atal); Mem. Bishop
Mus., vol. 11, no. 6, p. 404, 1934

(compiled).

Cme 129

1725

Villago ciliata Cuvier

Villago ciliata Cuvier, Hist. nat. Poiss.,
vol. 3, 1829, p. 415. Southern Seas

(Peron). ^l_m Valenciennes, Règne Animal

Cuvier, Ill. nat., Poiss., 1839, pl. 13, fig. 2.

^l_m Günther, Cat. Fishes Brit. Mus., vol. 2, 1860,
p. 245 (Tasmania, Australia, Port Jackson,

Cape York). ^l_m Gill, Proc. Acad. Nat. Sci.

Philadelphia, 1860, p. 504 (compiled). ^l_m

Kner, Reise Novara, Fische, 1865, p. 127

(Sydney). ^l_m Steindachner, Sitz. Ber. Akad.

Wiss. Wien, math.-naturw. Klasse, vol. 53,

pt. 1, 1866, p. 443 (Port Jackson). ^l_m Castelnau,

Proc. Zool. Acclimatiz. Soc. Victoria, vol. 2,

1873, p. 113 (Houmaea, New Caledonia) ~~then~~

~~now at Australia~~. ^l_m Alleyne and

Macleay, Proc. Linn. Soc. New South Wales,

vol. 1, 1876, p. 279 (Cape York; Percy Islands).

^l_m Klunzinger, Sitz. Ber. Akad. Wiss. Wien,

math.-naturw. Klasse, vol. 50, pt. 1, 1879, p.

Scomber carangus (part) Bloch,
Natwges. Ausland. Fische, vol.
7, p. 69, pl. 340, 1793 (Moluccas
[not Antilles or Brazil]).

33 fathoms.

Apogon taeniochrous Regan, Journ.

Lin. Soc. London, vol. 12, ser. 2, 1907,
p. 226. Maldives.

Amia pectorata Smith and Race, Proc. U. S. Nat. Mus., vol. 41, 1911, p. 153, fig.

Malunipa Island, Philippines; Sipadan
Island, Borneo.

Caranx carangus ~~Linnaeus~~ Cuvier,
 Hist. Nat. Poiss., vol. 9, p. 91, 1833 (part).
 — Günther, Cat. Fish. Brit. Mus., vol.
 2, p. 448, 1860 (India; Madras;
 Amboina; Sumatra). — Kner, Reise
 Novara, Fische, p. 157, 1865 (no locality).
 — Day, Fishes of India, pt. 2, p. 215, pl.
 50, fig. 4, 1876 (Madras).

— Macleay, Proc. Linn. Soc. New South
 Wales, vol. 7, 1882, p. 356 (New Guinea).

— Smith and Seale, Proc. Biol. Soc.
 Washington, vol. 19, 1906, p.
 (Mindanao). — Seale and Bean,
 Proc. U. S. Nat. Mus., vol. 33, 1907, p.
 242 (Zamboanga).

— Sauvage, Hist. Madagascar, Poiss.,
 p. 325, 1891 (note), p. 508 (reference).

— Regan, Ann. Natal Mus., vol. 1, pt. 3,
 p. 246, May 15, 1908 (Durban Bay). —
Gilchrist and Thompson, Ann. South
 African Mus., vol. 16, pt. 13, p. 242, 1909 (Natal).

Caner 29

7700

Sillago parwisquamis Gill

Sillago parwisquamis Gill, Proc. Acad.
Nat. Sci. Philadelphia, 1861, p. (504)

505. Kanagawa, near Yokohama. $\frac{1}{m}$

Jordan and Snyder, Proc. U. S. Nat.
Mus., vol. 24, 1902, p. 487 (Tokyo Bay).

$\frac{1}{m}$ Franz, Abhandl. Kon. Bayer. Acad.
Wiss., Math.-physik. Klasse, ~~vol. 26, p. 1~~

vol. 4, Suppl. band 1, 1910, p. 83

(Yokohama). $\frac{1}{m}$ Jordan and Hobbbs,

Mem. Carnegie Mus., vol. 10, no. 2, June

27, 1925, p. 248 (Tokyo market).

— Beaufort, Bijdr. dierk., Amsterdam,
p. 133, 1913 (Buntan).

— Regan, Trans. Zool. Soc. London,
vol. 20, p. 276, 1914.

— Gilchrist and Thompson, Ann. Durban
Mus., vol. 1, pt. 4, p. 384, May 21, 1917 (reference).

— Hora, Mem. Roy. Asiatic Soc. Bengal,
vol. 6, p. 484, 1924 (Singgora).

— Barnard, Ann. South African Mus.,
vol. 21, pt. 2, p. 545, Oct. 1927 (katal;
Delagoa Bay).

— Duncker and Mohr, Mitteil. Zool.
Mus. Hamburg, vol. 44, p. 79, 1929.

23976 to 23980. Lunihe Strait, Celebes.
November 11, 1909. Length 45 to 64 mm.

23502 and 23503. Una Una Road,
Bintang Uluang Island, Gulf of Tomini,
Celebes. November 17, 1909. Length 50 to
65 mm.

18304. West of Malibagu Point, Celebes.
November 21, 1909. Length 62 mm.

23447 and 23448. Doworra Island,
Patiente Strait. December 2, 1909.
Length 55 to 58 mm.

23488 and 23489. Kayoa Island.
November 29, 1909. Length 36 to 65 mm.

23470 and 23471. Maitara Island.
November 26, 1909. Length 54 to 68 mm.

23349. Makyan Island. November 29,
1909. Length 65 mm.

23109 and 23110, 23630, 24011. Powati
Harbor, Makyan Island. November 28, 1909.
Length 50 to 67 mm.

Caranx (Caranx) carangus Weber and
Beaufort, Fishes Indo-Austral.
Archip., vol. 6, p. 257, 1931 (East
Indies).

Carangus carangus Bleeker, Rech.
Faune Madagascar, pt. 4, p. 99, 1874
(reference); Verh. Akad. Wet.
Amsterdam, vol. 18, p. 18, 1879
(Mauritius), p. 14 (Japan).

86101 U.S.N.M. Hanking, China.
C. Ping. Length 123 mm.

87031 U.S.N.M. Foochow.
Lowerby. Length 75 to 110? mm. 3 examples.

86368 U.S.N.M. China.
Lowerby. Length 55 to 95 mm. 3 examples.

Caranx ekala Valenciennes, Hist.

Nat. Poiss., vol. 9, p. 117, 1833

(type locality, Vizagapatam). —

Bleeker, Nat. Tijds. Ned. Indie,

vol. 3, 1852, p. 235 (Amboina), p.

690 (Wahai); Verh. Batavia.

Genoot. (makreel.), vol. 24, 1852,

p. 59 (Batavia; Pasuruan);

(hal. Ichth. Bengal), vol. 25, p.

44, 1853 (reference); Nat. Tijds.

Ned. Indie, vol. 6, 1854, p. 457

(Amboina); vol. 7, 1854, p. 227

(Macassar), p. 228 (Manado, Celebes),

p. 312 (Tjiringin), p. 361 (Batjan);

vol. 9, 1855, p. 432 (Groot Obij), p.

493 (Amasing and Madawang

Rivers, Batjan); vol. 10, 1856, p.

Depth $4\frac{2}{5}$ to $4\frac{1}{2}$; head $3\frac{1}{5}$ to $3\frac{1}{3}$, width $2\frac{1}{10}$ to $2\frac{1}{8}$. Snout 2 to $2\frac{1}{10}$ in head; eye $5\frac{1}{2}$ to $6\frac{1}{2}$, $2\frac{4}{5}$ to $3\frac{1}{8}$ in snout, $1\frac{1}{5}$ to $1\frac{3}{5}$ in interorbital; maxillary reaches $1\frac{7}{8}$ to $2\frac{1}{3}$ in snout, $4\frac{1}{5}$ to $4\frac{1}{4}$ in head; broad bands of villiform teeth in jaws and on vomer; interorbital $3\frac{7}{8}$ to $4\frac{1}{4}$, broadly convex; preopercle edge with low, sharp, inconspicuous denticles. Gill rakers $3 + 7$, short, robust, lanceolate, $3\frac{1}{4}$ in gill filaments, which $1\frac{3}{4}$ in eye.

Scales 61 to 63 in lateral line to caudal base and 6 or 7 more on latter, 6 above, 10 or 11 below, 31 to 34 predorsal forward opposite nostrils; 5 rows

1561

360 (Ternate); vol. 12, 1856, p. 193
(Ternate); Act. Soc. Sci. Ind.
Néerl., vol. 1, no. 3, 1856, p. 9
(Macassar); Verh. Batavia.
Genoot. (hal. Ichth. Japan), vol.
26, 1857, p. 5 (Nagasaki); Nat.
Tijds. Ned. Indie, vol. 13, 1857, p.
479 (Prigi, Java); Act. Soc. Sci.
Ind. Néerl., vol. 2, no. 7, 1857, p.
5 (Amboina); vol. 3, no. 3, 1857-
58, p. 5 (Japan); Nat. Tijds. Ned.
Indie, vol. 19, 1859, p. 435
(Sumbawa); Verslag. Kon. Akad.
Wet. Amsterdam, vol. 12, 1861, p.
31 (Singapore).

Depth $6\frac{1}{3}$ to $6\frac{3}{5}$; head $3\frac{4}{5}$ to $3\frac{7}{8}$, width $2\frac{1}{5}$ to $2\frac{1}{4}$. Snout $2\frac{1}{4}$ to $2\frac{1}{3}$ in head; eye $5\frac{1}{2}$ to $6\frac{1}{8}$, $2\frac{2}{5}$ in snout, $1\frac{1}{4}$ to $1\frac{1}{3}$ in interorbital; maxillary reaches $1\frac{7}{8}$ to 2 in snout, length $4\frac{2}{3}$ to $4\frac{3}{4}$ in head; teeth villiform, in broad bands in jaws and on vomer; interorbital $4\frac{1}{4}$ to $4\frac{7}{8}$, slightly elevated and slightly convex; preopercle edge rough or weakly jagged. Gill rakers $2 + 7$, short, strong, lanceolate, $2\frac{1}{2}$ in gill filaments, which $1\frac{1}{4}$ in eye.

Scales 83 to 88 counted along lateral line to caudal base and 10 more on latter; tubular scales 80 or 81 in lateral line to caudal base and 10

Caranx cynodon Bleeker, Nat. Tijds.
 Ned. Indie, vol. 1, p. (355) 362,
 1850 (type locality, Batavia);
~~Id.~~ vol. 12, p. 214, 1856 (Nias);
 Act. Soc. Sci. Ind. Néerl., vol. 3,
 no. 9, p. 6, 1857-58 (Sibogha). —
Günther, Cat. Fish. Brit. Mus.,
 vol. 2, p. 447, 1860 (copied). —
~~Kner~~, Reise Novara, Fische, p. 158, 1865 (Java).
~~—~~ Wermann and Seale, Bull. Bur.
 Fisher., vol. 26, p. 64, 1906 (1907)
 (Bacon?). — Fowler, Proc. Acad.
 Nat. Sci. Philadelphia, vol. 79,
 p. 270, 1927 (Philippines [not type
 of Caranx semisomnus]).

Caranx (Caranx) cynodon Weber and
Beaufort, Fish. Indo-Austral.
 Archip., vol. 6, p. 252, 1931 (copied).
Selar cynodon Bleeker, Verh. Batavia.
 Genoot. (makreel.), vol. 24, p. 57, 1852
 (Batavia).

least depth of caudal peduncle $3\frac{1}{4}$ to $3\frac{1}{2}$; pectoral $1\frac{1}{4}$ to $1\frac{1}{2}$; ventral $1\frac{2}{5}$ to $1\frac{3}{5}$.

Back dull brown, below whitish. Iris gray. Fins brown, spinous dorsal gray.

East Indies, Philippines.

A.N.S.P.

47648 and 47649, Philippines. Commercial
Museum of Philadelphia. Length 168 to 188
mm. ~~from the Philippines~~

Caranx hippos (not Linnaeus) Peters,
Monatsb. Akad. Wiss. Berlin,
1876 (1877), p. 836 (Amboina;
New Britain). — Jordan and
Snyder, Annot. Zool. Japon., vol.
3, 1901, p. 67 (reference). — Fowler,
Proc. Acad. Nat. Sci. Philadelphia,
vol. 79, 1927, p. 270 (Vigan, Rio
Grande at Mindanao).
— Oshima, Philippine Journ. Sci.,
vol. 26, no. 3, p. 374, March 3, 1925
(Tainan, Formosa).

1719

22593 U.S.N.M. Awa. Japanese
Government. Length 190 mm.

26241 U.S.N.M. Japan. P. L. Jouey.
Length 190 mm.

26241 U.S.N.M. Japan. Prof. E. V.
Morse. Length 80 to 222 mm. 9 examples.

37984 U.S.N.M. East Asia,
H. M. Ferebee. Length 132 mm.

44876 U.S.N.M. Japan. Japanese
Government. Length 187 to 220 mm. 3 examples.

57528 U.S.N.M. Japan. P. L. Jouey.
Length 87 to 92 mm.

57591 U.S.N.M. Japan. P. L. Jouey.
Length 156 mm.

59670 U.S.N.M. Kochi. Dr. H. M. Smith.
Length 147 mm.

71348 U.S.N.M. Kagoshima. Albatross
Collection. Length 107 to 180 mm. 8 examples.

76635, 76636 U.S.N.M. Japan, Formosa.
Dr. Fred Baker. Length 86 to 102 mm. 10 examples.

Caranx rhabdotus Jenkins, Bull. U.
S. Fish Comm., vol. 22, p. 444, fig. 16,
1902 (1903) (type locality, Honolulu):

~~1575~~

20598. Lingayen Gulf, Luzon. May 11,
1909. Length 213 mm.

5569 to 5573, 7404. Malaga River, Hinunangan
Bay, Leyte Island. July 30, 1909. Length 178
to 241 mm.

11645. Malampaya Island. December 26, 1908.
Length 118 mm.

19605. Manila harbor. January 13, 1908.
Length 74 mm.

³
4 examples. Manila harbor. March 16, 1908.
Length ¹⁰⁰~~4~~ to 115 mm.

9 examples. Manila harbor. December 30, 1909.
Length 43 to 103 mm.

11592. Manila market. March 16, 1908.
Length 197 mm.

~~8048, 8049. Manila market. March 18, 1908.
Length 123 to 126 mm.~~

5 examples. Manila market. December 12, 1909.
Length 97 to 163 mm. Silvery, greenish on
back. A silvery lateral stripe. Dorsal

Caranx sexfasciatus (not Duoy and
Gaimard) Fowler, Mem. Bishop
Mus., vol. 10, p. 149, 1928 (part) ..

5961, 12086. Cavite market. December 1, 1908. Length 117 to 172 mm.

7520, 7530. Cotabato, Mindanao. May 20, 1909. Length 107 to 111 mm.

~~7836. Cebu market. April 7, 1908.~~

~~Length 203? mm.~~

22516. Lagupan, Luzon. March 19, 1908. Length 159 mm.

22116. Davao, Mindanao. May 16, 1908. Length 101 mm.

20087. Dumaca River, Luzon. February 25, 1909. Length 83 mm.

16331. Endeavor Strait, north west coast Palawan. December 23, 1908. Length 121 mm.

7 examples. Estero, Sablayan Bay, Mindoro. December 13, 1908. Length 46 to 69 mm.

6025, 6031. Hinunangan Bay, Leyte Island. July 30, 1909. Length 80 to 109 mm.

19377. Iloilo market. March 28, 1908. Length 107 mm.

Depth $2\frac{4}{5}$ to 3; head $3\frac{2}{5}$ to $3\frac{1}{2}$, width 2 to $2\frac{1}{5}$. Snout $3\frac{1}{5}$ to $3\frac{1}{4}$ in head from snout tip; eye $4\frac{1}{4}$ to $4\frac{2}{5}$, $1\frac{2}{5}$ in snout, $1\frac{1}{6}$ to $1\frac{1}{4}$ in interorbital, hind adipose lids invading $\frac{1}{3}$ to $\frac{2}{5}$ of eye; maxillary reaches $\frac{2}{5}$ to $\frac{1}{2}$ in eye, expansion $1\frac{1}{2}$ to $1\frac{3}{4}$ in eye, length $2\frac{1}{3}$ to $2\frac{2}{5}$ in head from snout tip; interorbital $3\frac{1}{4}$ to $3\frac{2}{3}$, convexly elevated. Gill rakers 7+17, lanceolate, equal gill filaments or $1\frac{1}{5}$ in eye.

Scutes 33 to 36 of which last 2 or 3 on caudal base, arch $1\frac{1}{4}$ to $1\frac{2}{5}$ in straight section.

^{of lateral line}
Chest and breast naked below, except small patch of small scales close before ventrals.

D. I, VIII - I, I, 20, I - or I, I, 22, I,
 third spine 2 to $2\frac{2}{5}$ in total
 head length, first branched rays
 $1\frac{3}{5}$ to $1\frac{3}{4}$; A. II - I, I, 16, I to
I, I, 18, I, first branched ray
 $1\frac{2}{3}$ to 2; upper caudal lobe 1 to
 $1\frac{1}{10}$; least depth of caudal
 peduncle $7\frac{2}{5}$ to 8; ventral 2
 to $2\frac{1}{8}$; pectoral $2\frac{3}{4}$ to 3 in fish
 without caudal, rays II, 19.

Above brown, sides and below
 whitish, with silvery reflections.
 Lower fins much lighter to
 whitish. No dark spot on
 opercle.

Natal, Delagoa Bay, Madagascar,
 India, Malaya, East Indies,
 Philippines, Melanesia, Polynesia,
 Hawaii.

1568

Wakuiya thinks Caranx rhabdotus
Jenkins is likely this species
as its eye is almost as long as
the snout and the lateral line
curving more anteriorly and
more strongly than in Caranx
sexfasciatus.

14038, 14040. Baganga Bay.

May 13, 1908. Length 117 to 123 mm.

~~Length 117 to 123 mm. A. II - I, 18, I.~~
20259. Baganga Bay. May 15, 1908. Length 122 mm.
5462. Batud River, Luzon.

June 15, 1909. Length 95 mm.

A. II - I, 18, I.

21240. Below mouth of Mindanao River, Cotabato, Mindanao. May 20, 1908. Length 61 mm. A. II - I, 18, I.

Eighteen examples. Cebu harbor. August 12, 1909. Length 20 to 47 mm. Dark brown shade or blotch on opercle. A. II - I, 18, I.

11723. Cotabato market.

May 20, 1908. Length 135 mm.

A. II - I, 18, I.

Two examples. Iloilo River tidal.

June 18, 1909. Length 61 to 70 mm.

A. II - I, 18.

19927, 20990. Parang Parang, Mindanao.

May 23, 1908. Length 103 to 107 mm.

A. II - I, 18, I.

75438 U. S. N. M. Nagasaki.
Jordan and Snyder. Length 200 to 220
mm. 2 examples.

75439 U. S. N. M. Tokyo. Jordan
and Snyder. Length 175 mm.

75440 U. S. N. M. Inomichi.
Jordan and Snyder. Length 99 to 140 mm.
3 examples.

75441 U. S. N. M. Kawatana.
Jordan and Snyder. Length 205 mm.

75922 U. S. N. M. Japan? O. L. Jour.
Length 300 mm.

One example. Philippines.
Length 52 mm. $\underline{\underline{A. II - I, 18.}}$

One example. Port Ganselo, Luzon.
July 13, 1908. Length 62 mm.
 $\underline{\underline{A. II - I, 19.}}$

$\underline{\underline{20897.}}$ Pucot, Mariveles River.
January 27, 1909. Length 120 mm.
 $\underline{\underline{A. II - I, 18, I.}}$

$\underline{\underline{8781.}}$ Santiago River, Pagapas
Bay, Luzon. February 20, 1909.
 $\underline{\underline{A. II - I, 18, I.}}$

$\underline{\underline{8336}}$ to $\underline{\underline{8338.}}$ Subig Bay.
January 7, 1908. Length 87 to 107 mm.
 $\underline{\underline{A. II - I, 18, I.}}$

Six examples. Tilig, Lubang.
July 14, 1908. Length 56 to 84 mm.
 $\underline{\underline{A. II - I, 18, I.}}$

1507
shows but 23 soft dorsal rays and
the entire preopercle edge denticulate.
The nominal Sciaena nibe Jordan
and Thompson does not seem to me
to differ.

22543 U.S.N.M. Japan. Japanese
Government. Length 265_{mm}. Is Corvina sina.

44892 U.S.N.M. Japan. Japanese
Government. Length 25mm. Is Corvina sina.

57595 U.S.N.M. Japan. P. L. Jouy.
Length 188mm. Is Corvina schlegeli:

59728 U.S.N.M. Kochi, Japan. Dr.
H. M. Smith. Length 146mm.

67331 U.S.N.M. Wakkanou, Japan.
Jordan and Snyder. Length 380mm.
Type of Sciaena nibe.

1571

Seven examples. Kema, Dutch
East Indies. November 13, 1909.
Length 73 to 84 mm. A. II - I, 18 or
19.

Thirteen examples. Eiki, Buru.
December 9, 1909. Length 48 to 78 mm.
A. II - I, 18, I.

21486. Tifer Bay, Buru.
December 10, 1909. Length 67 mm.
A. II - I, 18, I.

156

with 10 to 19 transverse series of
basal elements; cirruli fine.

D. X or XI, I, 26, I to 28, I, fourth
spine $2\frac{1}{5}$ to $2\frac{1}{2}$ in total head length,
first ray $3\frac{2}{5}$ to $3\frac{3}{4}$; A. II, 7, I, second
spine $4\frac{1}{2}$ to 6, first ray $2\frac{3}{4}$ to $3\frac{1}{3}$;
caudal $1\frac{1}{3}$ to $1\frac{1}{2}$, cuneate; least depth
of caudal peduncle $3\frac{2}{5}$ to $3\frac{4}{5}$; pectoral
 $1\frac{1}{5}$ to $1\frac{1}{4}$; ventral $1\frac{3}{4}$ to $1\frac{7}{8}$.

Back brown, sides and below silvery
white. Iris white. Spinous dorsal
with membranes brown to dusky. Soft
dorsal and caudal pale brownish,
other fins whitish.

India, China, Formosa, Korea, Japan.
This species greatly resembles Bleeker's
figure of Pseudosciaena veneus, which

A. N. S. P., two examples. Vigan,
Philippines. 1923. Rev. Joseph
Clemens. Purchased.

A. N. S. P., one example. Rio
Grande, Mindanao. Bureau of
Fisheries. As Caranx carangus.

A. N. S. P., two examples. Natal.
1931. H. W. Bell Marley. Length 283 to
370 mm.

12602 U.S.N.M. New South Wales.
British Museum. Length 50 mm.

40038 to 40040 U.S.N.M. Port Jackson.
Length 81 to 176? mm.

42063 to 42067 U.S.N.M. Port Jackson.
Australian Museum. Length 193 to 198 mm.
2 examples.

47783 U.S.N.M. Port Jackson.
Australian Museum. Length 153 mm.

47784 U.S.N.M. Melbourne, Victoria.
~~Length~~ Australian Museum. Length 198? mm.

48808 U.S.N.M. Port Jackson. J. L. Ogilby.
Length 86 to 109 mm. 3 examples.

59947 U.S.N.M. Port Jackson. D. G. Stead.
Length 165 mm.

59982 U.S.N.M. Port Jackson. D. G. Stead.
Length 70 mm.

Caranx sanson (Forskål)

Scomber sanson Forskål,
 Descript. Animal., pp. 12, 56,
 1775 (type locality, Lohajal).
 — Bonnaterre, Tabl. Ichth., p.
 142, 1788 (Red Sea). — Gmelin,
 Syst. Nat. Linn., pt. 1, p. 1334,
 1789 (copied). — Walbaum, Artedi
 Pisc., vol. 3, p. 217, 1792 (copied).

Caranx sanson Lacépède, Hist.
 Nat. Poiss., vol. 3, pp. 59, 75, 1802
 (compiled). — Elera, Cat. Fauna
 Filipinas, vol. 1, p. 572, 1895 (Cebu).

207
Amia doederleini Jordan and Snyder.

Apogon doederleini Jordan and Snyder,
Proc. U. S. Nat. Mus., vol. 23, 1901, p. 901,
fig. 6. Nagasaki.

— Wakiya, Ann. Carnegie Mus., vol.
15, p. 197, pl. 28, figs. 1-2, 1924.
(Ryukyu; Kumamoto; Iwajima;
Formosa) — Fowler, Mem. Bishop
Mus., vol. 11, no. 6, p. 405, 1934 (ref-
erence).

Caranx (Caranx) sansum Weber and
Beaufort, Fishes Indo Austral.
Archip., vol. 6, p. 254, 1931 (Amboina).

277

Amia percaiformis Gray, Cat. Fishes
Gronow, vol. 2, 1854, p. 173. East Indies.
(On Gronow, Zoophylae., 1763, no. 273,
pl. 9, fig. 2.)

Amia sealei Fowler, Proc. Acad. Nat.
Sci. Phila., 1918, p. 20, fig. 9. Philippines.
— Fowler and Bean, Proc. U. S. Nat.
Mus., vol. 62, 1922, p. 74 (Cebu). — Fowler,
Proc. Acad. Nat. Sci. Phila., 1927, p. 274
(San Fernando, Santa Maria and types).

- Caranx farra Cuvier, Hist. Nat. Poiss., vol. 9, p. 109, 1833 (on Caranx dandree parrah Russell, Fishes of Coromandel, vol. 2, p. 35, pl. 147, 1803, type locality, Vijagapatam).
- Bleeker, Verh. Batavia. Genoot. (Nat. Ichth. Bengal), vol. 25, p. 44, 1853 (reference).
- Jordan, Madras Journ. Lit. Sci., p. 137, 1851.
- Günther, Cat. Fish. Brit. Mus., vol. 2, p. 446, 1860 (Amboina).
- Elera, Cat. Fauna Filipinas, vol. 1, 1895, p. 510 (Luzon, Cavite, Santa Cruz, Masugbi, Batangas).
- Day, Fishes of India, pt. 2, p. 215, 1876; Fauna Brit. India, Fishes, vol. 2, p. 152, 1889.
- Jordan and Richardson, Mem. Carnegie Mus., vol. 4, no. 4, p. 178, Aug. 28, 1909 (on Reem record).
- Nyder, Proc. U. S. Nat. Mus., vol. 42, 1912, p. 496 (Okinawa).
- Gogorza, Anal. Soc. Españ. Hist. Nat. Madrid, vol. 17, p. 390, 1888 (Masugbi, Batangas).
- Wakaya, Ann. Carnegie Mus., vol. 15, p. 196, pl. 29, fig. 2, 1924 (Bonin Islands).
- Ashima, Philippine Journ. Sci., vol. 26, no. 3, p. 372, March 3, 1925 (compiled).

8832. Maculabo Island. June 14, 1909. Length 300 mm. Side crossed by 2 longitudinal yellow bands, one in region of lateral line and one backward from upper base of pectoral. Fin rays somewhat vermilion, taking form of bars on caudal base and more or less mottled on dorsal. This specimen from deeper water than usual.

Lethrinus mahsena (Forsk.)

Sciaena mahsena FORSKÅL, Descript. Animal., 1775, pp. xii, 52, (Arabia). - BONNATERRE, Tabl. Ichth., 1788, p. 124 (Red Sea). - MELIN, Syst. Nat. Linn., vol. 1, 1789, p. 1304 (Arabia).

Sparus mahsena LACEPÈDE, Hist. Nat. Poiss., vol. 4, 1802, pp. 34, 111 (Arabia).

Lethrinus mahsena VALENCIENNES, Hist. Nat. Poiss., vol. 6, 1830, p. 313 (copied). - RÜPPELL, Neue Wirbelth., Fische, 1835, p. 119, pl. 29, fig. 4 (Red Sea). - GÜNTHER, Cat. Fish. Brit. Mus., vol. 1, 1859, p. 463 (Red Sea). - SCHMELTZ, Cat. Mus. Godeffroy, vol. 4, 1869, p. 14 (Kandavu). - KLUNZINGER, Verh. zool. bot. Ges. Wien, vol. 20, 1870, p. 753 (types of Lethrinus bungus and Lethrinus abbreviatus). - GÜNTHER, Journ. Mus. Godeffroy, vols. 2-3, pts. 5-6, 1874, p. 65, pl. 48 (Seychelles, Philippines, Pelew, Fiji, Hervey, Paumotu Islands). - PETERS, Monatsb. Akad. Wiss. Berlin, 1876, p. 438 (Mauritius). - BLEEKER, Atlas Ichth. Ind. Néerland., vol. 8, 1876-1877, p. 113 (on GÜNTHER). - KOSSMAN and RAUBER, Wiss. Ergebn. Reise Küstengeb. Roth. Meers, 1877, p. 11 (Red Sea). - KOSSMAN, Zool. Anz., vol. 2, 1879, p. 22 (Red Sea). - GÜNTHER, Philos. Trans. Roy. Soc., ~~London~~ vol. 168, 1879, p. 471 (Rodriguez).

Selar farra Bleeker, Verh. Batavia.
Genoot. (Maatsch.), vol. 24, p. 58,
1852 (Siboga).

Carangus farra Jordan and
Evermann, Proc. U. S. Nat. Mus.,
vol. 25, p. 337, 1902 (Keelung, Formosa).
Bleeker, Ned. Tijds. Dierk., vol. 2, p. 286,
1865 (reference). —

Trichopterus farra Jordan and
Starke, Ann. Carnegie Mus., vol. 11,
p. 442, 1917 (Ceylon).

Follow - Incl Caps
Loaded 8 Point

No. 65898 U.S.N.M. Tuamotu Islands. Albatross collection. Length, 447 mm.

No. 27632 A.N.S.P. Padang, Sumatra. A.C. Harrison and H.M. Miller. Length

300 mm. When fresh in arrack grayish brown above, whitish below. Narrow gray longitudinal lines along body, line to each row of scales. Four large ill-defined or diffuse gray-brown blotches along side. Inside gill opening orange red. Iris yellowish. Fins dilute olivaceous, slightly grayish dusky. Edges of caudal and anal pale. Pectoral pale olive, axil pale orange. Ventral pale olive gray, dusky terminally.

Lethrinus nematacanthus Bleeker

Lethrinus nematacanthus BLEEKER, Nat. Tijds. Nederland. Indië, vol. 6,

1854, p. 403, (Nagasaki); Verh. Batav. Genootsch. (Japan), vol. 26,

1857, p. 90, pl. 6. - GÜNTHER, Cat. Fish. Brit. Mus., vol. 1, 1859,

p. 456 (Lousiades). - BLEEKER, Nederland. Tijdschr. Dierk., vol. 4,

1873, p. 327 (Amboina and Kiuseru). - ALLEYNE and MACLEAY, Proc. Linn.

Soc. New South Wales, vol. 1, 1876, p. 275 (Cape Grenville and Pipon

Islands). - BLEEKER, Atlas Ichth. Ind. Néerland., vol. 8, 1876-1877,

p. 114, pl. (59) 337, fig. 3 (Amboyna). - MEYER, Anal. Soc. Espan.

Hist. Nat. Madrid, vol. 14, 1885, p. 18 (North Celebes; Cebu). -

JORDAN and SNYDER, Annot. Zool. Japon., vol. 3, 1901, p. 80 (Nagasaki).

- EVERMANN and SEALE, Bull. Bur. Fisher., vol. 26, 1906 (1907), p. 86

(Bulan). - JORDAN and THOMPSON, Proc. U.S. Nat. Mus., vol. 41, 1912,

p. 559 (Wakanoura, Tokyo, Bulan, Moreton Bay). - WEBER, Siboga Exped.,

Fische, vol. 57, 1913, p. 288 (Makassar). - FOWLER, Copeia, No. 57,

June 18, 1918, p. 64 (Philippines). - IZUKA and MATSUURA, Cat. Zool.

Spec. Tokyo Mus., Vertebr., 1920, p. 149 (Ogasawarajima).

Caranx ignobilis (not Forskål)

Kendall and Goldsborough, mem.

Mus. Comp. Zool., vol. 26, p. 260, '911

(Mukuhiva). — Fowler, mem.

Bishop Mus., vol. 10, p. 148, 1928

(Mukuhiva material).

2 rows on cheek to preopercle ridge.
Tubes in lateral line rather large,
well marked and each with small
crimped basal scale. ^{Scales with} 14 basal
radiating striae; 43 to 110 apical denticles
with 1 or 2 series of basal elements;
circuli coarse.

D. VII - I, 9, I, fourth spine $2\frac{1}{6}$ to $2\frac{2}{5}$
in total head length, second ray $1\frac{2}{3}$ to
 $1\frac{4}{5}$; A. II, 8, I, second spine 3 to $3\frac{1}{4}$,
second ray $1\frac{7}{8}$ to 2; caudal $1\frac{1}{5}$ to $1\frac{1}{4}$,
little emarginate behind; least depth of
caudal peduncle $2\frac{1}{5}$ to $2\frac{7}{8}$; pectoral
 $1\frac{2}{3}$ to $1\frac{3}{4}$; ventral $1\frac{3}{4}$ to $1\frac{4}{5}$.

Brown on back and upper surface,
sides and below light brown to much
paler with silvery white reflections.
Dark brown band from snout tip to
eye and back little above median axis

Depth $2\frac{2}{3}$ to $2\frac{3}{4}$; head $3\frac{1}{3}$ to $3\frac{2}{5}$, width $2\frac{1}{10}$ to $2\frac{1}{8}$. Snout 3 to $3\frac{1}{5}$ in head from snout tip; eye $4\frac{1}{4}$ to $4\frac{1}{2}$, $1\frac{1}{2}$ to $1\frac{3}{5}$ in snout, $1\frac{1}{4}$ in interorbital, broad adipose lids extend over posterior third of eye; maxillary reaches $\frac{2}{5}$ in eye, expansion $1\frac{1}{4}$ to $1\frac{1}{3}$, length $2\frac{2}{5}$ to $2\frac{1}{2}$ in head from snout tip; interorbital $3\frac{4}{5}$ to $3\frac{7}{8}$, convexly elevated, with median occipital keel. Gill rakers $8+17$, lanceolate, gill filaments $\frac{7}{8}$ of gill rakers, which $1\frac{1}{2}$ in eye.

Scales 40 or $41+35$ in lateral line, arch $1\frac{2}{5}$ in straight section; 15 scales above arch, 27 or 28 below. Under surface of chest and breast naked,

with small patch of scales
close before ventral bases.

D. I, VIII - I, 21, I or I, 22, I, third
spine $1\frac{7}{8}$ to $2\frac{2}{5}$ in total head
length, first branched ray $1\frac{1}{8}$
to $1\frac{1}{4}$; A. II - I, 18, I or I, 19, I, first
branched ray $1\frac{2}{5}$ to $1\frac{1}{2}$; least
depth of caudal peduncle 7;
ventral $2\frac{1}{10}$ to $2\frac{1}{3}$, rays I, 5;
pectoral rays II, 20, fin $2\frac{2}{3}$ to
 $2\frac{3}{4}$ in fin without caudal;
caudal $3\frac{1}{5}$ to $3\frac{1}{2}$, deeply forked.

Back brownish, sides and
below white to silvery white.
No dark spot on opercle. Iris
silvery white. Dorsals and
caudal, also anal and pectoral,
more or less brownish, with
pale borders.

Red Sea, India, Ceylon, East
Indies, Philippines, Formosa,
Riu Kiu, Japan, Micronesia,
Polynesia.

U. S. N. M., No. 65 773. Nukuhiva.
Albatross Collection. Length
340? to 358 mm. 2 examples.
As Carany ignobilis.

Follow—Incl Caps

8 pt. Beaded

134789

4

- 6427, 6467. Tilig, Lubang. July 14, 1908. Length, 300 to 310 mm.
7654. Ulugan Bay, Oyster Inlet. December 28, 1908. Length, 276 mm.
- 6667, 20829. Varadero Bay, Mindoro. July 23, 1908. Length, 164 to 220 mm.
7145. West coast Palau Island. November 18, 1908. Length, 280 mm.
6087. Zamboanga market. May 29, 1908. Length 312 mm.
21327. Uki, Boero Island, Dutch East Indies. December 9, 1909. Length, 98 mm.
20837. Tomahu Island. December 11, 1909. Length, 97 mm.
- 13510, 19792. Gomomo Island, Pitt Passage. December 3, 1909. Length, 117 to 140 mm.
17694. Limbe Strait, Celebes. November 10, 1909. Length, 143 mm.
- A906. Limbe Strait, Celebes. November 11, 1909. Length, 430 mm. Few scattered black spots, little less than pupil, on sides of body.
- A1040. North of Malibagu Point, Celebes. November 21, 1909. Length, 283 mm.
9723. Kayoa Island. November 29, 1909. Length, 135 mm.
14414. Talisse Island. November 9, 1909. Length, 95 mm.
- A1399. Tampotana Island. December 21, 1909. Length, 240 mm.
- A1605. Nafa, Riu Kiu Islands. February 7, 1910. Length, 358 mm.
- No. 56202 U.S.N.M. Bureau of Fisheries (No. 4169). Length, 257 mm.
- No. 75896 U.S.N.M. Borneo. H.C. Raven. Length, 153 mm.
- No. 75897 U.S.N.M. Borneo. H.C. Raven. Length, 246 mm.
- No. 52800 A.N.S.P. Calapan, Mindoro. Rev. Joseph Clemens. 1923. Length, 142 mm.

The following represent the dark phase of this species. All are nearly uniform chocolate brown, except some pale spots on each side of the abdomen in alcoholic specimens mostly posteriorly:

8031. Capulaan Bay, Luzon. February 24, 1908. Length, 254 mm.
8723. Caracaran, Batan Island. June 28, 1908. Length, 318 mm.
6036. Little Santa Cruz Island. May 28, 1908. Length, 305 mm.

Caranx ignobilis (Forskål)

Scomber ignobilis Forskål, Descript.
Animal., pp. 12, 55, 1775 (type
 locality, Djedda; Lohaja, Red Sea).
 — Bonnaterre, Tabl. Ichth., p. 142,
 1788 (copied). — Gmelin, Syst.
Nat. Linn., pt. 1, p. 1333, 1789
 (copied). — Walbaum, Artedi Pisc.,
 vol. 3, p. 218, 1792 (copied).

22342. Shore above Iloilo River. June 2,
1908. Length 81 mm.

22889. Suber Bay, Hongapo. January
7, 1908. Length 84 mm.

9199, 9200, 9201. Tiliy, Lubang Island.
July 14, 1908. Length 176 to 210 mm.

17200 to 17203. Verde de Sur Island,
Palawan reef and sand flat. April 6, 1909.
Length 84 to 162 mm. 1 example.

18813, 18814. Yana River, Albay Gulf,
Luzon. June 7, 1909. Length 192 to 230 mm.

19332, 19333, 20230, 20394. Sandakan,
Borneo. March 2, 1908. Length 88 to 165 mm.

5255. Sandakan. March 21, 1908.
Length 154 mm.

12389. Hong Kong market. August 13, 1908.
Length 183 mm.

12634 U.S.N.M. Seychelles. British
Museum. Length 105 to 108 mm.
2 examples.

Caranx ignobilis Klunzinger,
Sitzs. Ber. Akad. Wiss. Wien,
math.-naturwiss. Kl., vol. 80, pt. 1,
p. 377, 1879 (1880) (Port Darwin;
Cleveland Bay).

— Macleay, Proc. Linn. Soc. New
South Wales, vol. 9, pt. 1, p. 24, 1884
(copied). — Klunzinger, Fische
Roth. Meer., vol. 1, p. 100, 1884.

Spinous dorsal pink, with dusky.
Soft dorsal brighter, brown bar
across base slightly oblique. Anal
vermilion, with brown basal bar
as on soft dorsal. Caudal reddish
dusky. Paired fins pink, ventrals
brighter.

^{H.}
Caranx ignobilis Steindachner,
 Denks. Akad. Wiss. Wien, math.-
 naturw. Kl., vol. 70, p. 495, 1901
 (Honolulu; Laysan). — Jordan and
Seale, Bull. Bur. Fisher., vol. 25,
 p. 231, 1905 (1906) (Samoa). —
Jordan and Snyder, Proc. U. S. Nat.
 Mus., vol. 29, p. 354, 1906 (Tahiti).
 — Jordan and Seale, Bull. Bur.
 Fisher., vol. 26, p. 14, 1906 (1907)
 (Cavite). — Jordan and Richardson,
 Bull. Bur. Fisher., vol. 27, p. 250,
 1907 (1908) (Iloilo; Lubang; Mem.
 Carnegie Mus., vol. 4, no. 1, p. 178, 1908 (Takao, Formosa). —
Kendall and Goldsborough, Mem.
 Mus. Comp. Zool., vol. 26, p. 269,
 1911 (Mukuhia, Marquesas Islands).
 — Snyder, Proc. U. S. Nat. Mus.,
 vol. 42, 1912, p. 411 (Kagoshima), p.
 496 (Okinawa). — Fowler, Copeia,
 no. 58, June 18, 1918, p. 63 (Philippines).

20993. Parang Parang, Mindanao.

May 23, 1908. Length 171 mm.

14222. Port San Pio Luinto, Camiguin Island. November 11, 1908. Length 105 mm.

19509, 19510. Ragay River, Ragay Gulf, Luzon. March 10, 1909. Length 25 to 96 mm.

8 examples. Smallest with 10 or 11 dark brown spots axial along middle of side, of which last 2 on caudal base. As seen above 8 dark brown median blotches, first predorsal, second and third at spinous dorsal base, fourth before soft dorsal origin, fifth to seventh along base of soft dorsal and eighth at caudal peduncle above.

8547. San Fernando, Union Province, Luzon. March 17, 1908. Length 154 mm.

12319. San Vicente Harbor, Luzon. November 13, 1908. Length 21 to 184 mm. 13 examples.

— Weber, Siboga Exped., vol. 5 ^{Fische,} 7₁, p. 398,
1913 (Kwandang, North Celebes).

— McCulloch, Biol. Res. Endeavour,
vol. 3, pt. 3, p. 126, April 21, 1915
(Port Hedland; Cape York).

1 example. Mompog Island, vicinity
Marinduque March 3, 1909. Length
27 mm.

14 examples. Catangian Bay, Masbate
Island. April 18, 1908. Length 23 to
30 mm.

8408 to 8410. Hokuho, Soo Wan, Formosa.
January 29, 1910. Length 109 to 120 mm.
[2184] Pearl color, with brown
stripes. First stripe median, extends
from between eyes, dividing around
~~second~~ dorsal; second from snout,
above orbit to caudal base; median
from snout tip interrupted by eye
and ending in blotch size of pupil
at caudal base mainly above lateral
line; fourth across maxillary, under
eye through pectoral base and along
lower edge of caudal peduncle; fifth
short obscure stripe below pectoral.

— Jordan and Jordan, Mem. Carnegie Mus., vol. 10, No. 1, p. 39, Dec. 1922 (Honolulu).

— Wakiya, Ann. Carnegie Mus., vol. 15, p. 193, pl. 27, fig. 3, 1924 (Nagasaki); Uwajima; Ryukyu; Formosa.

— E. K. Jordan, Proc. U. S. Nat. Mus., vol. 66, art. 33, p. 16, 1925 (Honolulu).

— Barnard, Ann. South African Mus., vol. 21, pt. 2, p. 545, Oct. 1927 (compiled).

size of pupil. Fourth dark band extends from below eye to pectoral and then back along lower side of caudal peduncle to caudal base.

Head all more or less with soiled appearance. Iris dark gray.

Fins all brownish, soft dorsal and anal each with subbasal dark longitudinal line

Originally described from 4 Japanese specimens and apparently not since reported. Our materials definitely place it in the faunas of both Formosa and the Philippines.

— Jordan and Jordan, mem.
Carnegie Mus., vol. 10, no. 1, p. 39,
December 1922 (note). — Fowler,
Bull. Bishop Mus., no. 22, p. 8, 1925
(Guam); Proc. Acad. Nat. Sci.
Philadelphia, vol. 77, 1925, p. 215
(Delagoa Bay); Journ. Bombay
Nat. Hist. Soc., vol. 32, no. 4,
May 31, 1928, p. 707 (Ceylon); mem.
Bishop Mus., vol. 10, p. 148, 1928
(Hawaiian Islands; Pacific; type
of Carangus hippoides; Hukuhwa;
Honolulu; Shortland); ~~vol.~~ vol. 11, no.
5, p. 326, 1931 (reference); vol. 11, no.
6, p. 404, 1934 (Honolulu); Proc.
Acad. Nat. Sci. Philadelphia, vol.
86, 1934, p. 446 (Durban, Natal).

1574

dusky. Caudal greenish, with dusky edge. Anal and ventrals bright yellow. Pectorals plain. A common market fish.

6224. Mantaguin Bay, Palawan. April 2, 1909. Length 160 mm.

~~22006. Mariveles Bay, Luzon. January 27, 1909. Length 121 mm.~~

21608. Matnog Bay, Luzon. May 31, 1909. Length 107 mm.

20351. Iate River, Lagonoy Gulf, Luzon. June 17, 1909. Length 68 mm.

20659. North end Endeavor Strait, north west coast Palawan. December 22, 1908. Length 110 mm.

19575. Paluan Bay, Mindoro. December 11, 1908. Length 114 mm.

1 example. Panabutan Bay, Mindanao. February 6, 1908. Length 48 mm.

Caranx (Caranx) ignobilis Weber
and Beaufort, Fishes Indo-Austral.
Archip., vol. 6, p. 255, 1931 (Flores;
Kwandang).

Scales with 9 to 16 basal radiating striae; 12 to 145 apical denticles, with many as 8 transverse series of basal elements; ~~many~~ circuli fine.

D. VII - I, 9, I, third spine 2 to $2\frac{1}{10}$ in total head length, second ray $1\frac{2}{5}$ to $1\frac{1}{2}$; A. II, 8, I, second spine $2\frac{3}{4}$ to 3, first ray $1\frac{3}{4}$ to 2; caudal $1\frac{1}{5}$ to $1\frac{1}{4}$, emarginate; least depth of caudal peduncle $2\frac{1}{2}$ to $2\frac{2}{3}$; pectoral $1\frac{1}{3}$ to $1\frac{2}{5}$; ventral $1\frac{2}{3}$ to $1\frac{4}{5}$.

Shall brown generally, little paler underneath. Dark brown line along bases of dorsals. Second dark brown band from over eye back along upper side of caudal peduncle to caudal base. Median dark band from eye back to caudal base where forming black spot.

Carangus ignobilis Jordan and
Evermann, Bull. Bur. Fisher., vol.
23, pt. 1, p. 188, 1903 (1905)
(Honolulu).

Selar ignobilis Ashima, Philippine
Journ. Sci., vol. 26, no. 3, p. 383, March
1925 (compiled).

Cuv 130

173

Genus Sillaginodes Gill

Sillaginodes Gill, Proc. Acad. Nat. Sci. Philadelphia, 1861, p. 504. Type Sillago punctatus Cuvier, orthotypic.

Isoisillago hacley, Proc. Linn. Soc. New South Wales, vol. 3, 1879, p. 34. Type Isoisillago maculata hacley, monotypic.

Body elongated, scarcely compressed, back and abdomen more or less convex or rounded. Head elongate, conic, compressed, gradually narrowed forward. Eyes moderate, nearly median. Mouth small, jaws even or lower shorter. Scales very small, 170 in longitudinal row. First dorsal slopes down backward, margin straight or convex, spines 12; second dorsal longer, with spine and 26 rays. Anal with slender spine and 22 rays. Caudal emarginate. Ventral with slender spine.

Caranx sanson (not Forsk.) Ruppell,
Atlas Reise nördl. Afrika, Fische,
p. 101, 1828 (Agadda); Neue Wirbelth.
Fische, p. 48, 1835. — Günther,
Cat. Fish. Brit. Mus., vol. 2, p. 447,
1860 (Mauritius; India).

— Klunzinger, Verh. zool. bot. Gesell.
Wien, vol. 21, p. 466, 1871 (Red Sea).

— Bleeker, Rech. Faune Madagascar,
pt. 4, p. 99, 1874 (reference) —

— Day, Fishes of India, pt. 2, p. 216,
pl. 50, fig. 5, 1876 (Madras); Fauna
British India, Fishes, vol. 2, p. 155,
1889.

Carangus sanson Bleeker, Rech. Faune
Madagascar, pt. 4, p. 99, 1874
(Madagascar).

Carangus sanson Bleeker, Verh. Kon. Akad.
Wet. Amsterdam, vol. 18, (Maurice), p. 18,
1877 (1879) (reference) (error).

270

Depth $2\frac{2}{3}$ to 3; head $2\frac{1}{2}$ to $2\frac{2}{3}$, width $1\frac{7}{8}$ to 2. Snout 4 to $4\frac{1}{2}$ ^{from snout tip} in head; eye $2\frac{4}{5}$ to 2, greater than snout or interorbital; maxillary reaches $\frac{2}{3}$ in eye, expansion $2\frac{1}{6}$ to $2\frac{1}{2}$, length 2 to $2\frac{1}{8}$ in head; teeth villiform, in bands in jaws, on vomer and palatines; interorbital 4 to $4\frac{2}{3}$, very slightly convex; preopercle ridge entire, edge finely serrate. Gill rakers 5 + 14, lanceolate, little longer than gill filaments or $3\frac{1}{8}$ in eye.

Scales 24 in lateral line to caudal base and 4 more on latter, 2 above, 6 below, 3 or 4 predorsal, 3 rows on cheek; head naked, except cheeks and opercles. Tubes in lateral line large, each well exposed and with rather large crimped basal scale,

Carangus hippos (not Linnaeus)
Bleeker, Verslag. Kon. Akad. Wet.
 Amsterdam, ser. 2, vol. 2, p. 300, 1868
 (Waigiu).

Caranx hippos Peters, Monatsb. Akad.
 Wiss. Berlin, 1876 (1877), p. 836
 (New Britain). — Waite, Rec. Austral.
 Mus., vol. 5, p. 3, 1903 (Kauai,
 Marshalls; Banopa, Gilberts).
 — Beaufort, Bijdr. Dierk.
 Amsterdam, vol. 19, p. 133, 1913
 (Waigiu).

120
C. m. 120
e. m. 120
m. 120

173

Sillaginopodus, new subgenus ¹⁴
Type $\frac{1}{m}$ Sillago chondropus Bleeker

Diagnosis. ^m Ventral spine expanded
as thick cartilaginous pad, joined
with first ventral ray.

¹⁴
✓ Sillago; πούς, foot, with reference
to the modified ventral fins.

Carangus hippoides Jenkins,
Bull. U. S. Fish Comm., vol. 22, p.
443, fig. 15, 1902 (1903) (type
locality, Honolulu).

Caranx farra (not Valenciennes)
Fowler, Proc. Acad. Nat. Sci.
Philadelphia, vol. 79, 1927, p. 270
(Philippines).

The imperfectly described Sillago
terrac-reginal Castlenau is apparently
synonymous: 1730a

Depth little less than 4; head $3\frac{1}{3}$. Eye
 $4\frac{1}{2}$ in head, 2 in snout; interorbital 2 in
snout; preopercle entire; opercle ends in
small spine. Scales 64 in lateral line.
D. X, I, 18, third spine longest; A. II, 15;
caudal very slightly concave. Silvery,
upper parts greenish. On body some
very indistinct transverse dark bands,
disappearing in dried specimen. Length
305 mm.

28674 U. S. N. M. No locality.

Australian Museum. Two, 279 to 281 mm.

59886 U. S. N. M. New South Wales.

L. G. Stead. Four, 245 to 366 mm.

1593

Depth $2\frac{1}{5}$ to $2\frac{2}{3}$; head $2\frac{9}{10}$ to $3\frac{2}{5}$,
width $2\frac{1}{6}$ to $2\frac{1}{3}$. Snout $3\frac{1}{8}$ to $3\frac{1}{2}$
in head from snout tip; eye $3\frac{1}{10}$
to $3\frac{7}{8}$, 1 to $1\frac{1}{4}$ in snout, 1 to $1\frac{1}{4}$ in
interorbital, with rather narrow
posterior adipose lid; maxillary
reaches $\frac{2}{5}$ to $\frac{1}{2}$ in eye, expansion
 $1\frac{1}{2}$ to $1\frac{3}{5}$ in eye, length $2\frac{1}{10}$ to
 $2\frac{1}{4}$ in head from snout tip;
interorbital $3\frac{1}{4}$ to 4 , convex.
Gill rakers 6 or 7 + 15 or 16,
lanceolate, equal gill filaments
or $1\frac{1}{2}$ in eye.

Scales 43 to 57 + 28 to 37 in
lateral line, arch $1\frac{1}{6}$ to $1\frac{2}{5}$ in
straight section; 14 to 20 scales
above arch to soft dorsal origin,
22 to 31 below. Breast naked
below to ventral, except small
patch of small scales postero-

medially. Scales with 20 to 30 complete circles.

D. I, VIII - I, 19, I or I, 20, I,
third spine $2\frac{2}{5}$ to $2\frac{2}{3}$ in total head length, first branched ray $1\frac{1}{4}$ to $2\frac{1}{10}$; A. II - I, 16, I or I, 17, I, second spine $1\frac{1}{2}$ in eye, first branched ray $1\frac{1}{2}$ to $2\frac{1}{10}$ in total head length; caudal 1 to $1\frac{1}{3}$, strongly forked; least depth of caudal peduncle 7; pectoral 1 to $1\frac{1}{10}$, reaches third or fourth scute of lateral line, rays I, 19 or I, 20; ventral 2 to $2\frac{3}{5}$ in total head length, rays I, 5.

Back brownish, below silvery white. Iris gray. Spinous dorsal dusted with dusky. Soft dorsal and caudal with pale brownish, other fins

whitish. Faint gray spot on
opercle not larger than pupil.

Red Sea, Natal, Mauritius,
Madagascar, India, Ceylon,
East Indies, Philippines, Formosa,
Riu Kiu, Japan, North Australia,
Queensland, Melanesia, Micronesia,
Polynesia, Hawaii.

1596
One example. Sibuyan, Leyte.
July 26, 1909. Length 195 mm.
Scutes 30. Arch of lateral line
 $1\frac{1}{8}$ in straight section. D. I, 19.

1720

uniformly pale, pectoral with gray
or dusky slate blotch extending
over its base.

A valued food fish all along the
eastern and southern Australian
coast line. Distinguished from the
related Villago maculata by its
deeper caudal peduncle, which nearly
equals the postocular region. It
agrees, however, in the dark basal
pectoral blotch.

1597

21067. Abuyog, Leyte. July 26,
1909. Length 163 to 194 mm. A.
II - I, 16, I. A. II - I, 16, I.

Eleven examples. Batangas, Luzon.
June 7, 1908. Length 41 to 61 mm.
A. II - I, 16, I or 17, I.

6583. Bolinao Bay. May 10, 1909.
Length 50 mm. A. II - I, 17, I.

5993 [743]. Cavite market.
December 1, 1908. Length 123 mm.
A. II - I, 17, I.

20408, 20409. Cotabato, Mindanao.
May 20, 1908. Length 78 to 88 mm.
A. II - I, 16, I.

19399. Iloilo market, Iloilo.
March 28, 1908. Length 82 mm. A.
II - I, 16, I.

22917. D. 5641. Kalono Point
(W.), N. 61° N. 38° W., 6.5 miles (lat.
4° 29' 40" S., long. 122° 52' 30" E.),
Buton Strait. In 39 fathoms.
December 14, 1909. Length 67 mm.
A. II - I, 17.

1585

broadly convex; suborbital depth $1\frac{1}{2}$ to 2 in eye; flexible preopercle edge with numerous slender weak spinules, usually hidden by scales. Gill rakers $6 + 14$ or 15, lanceolate, little greater than gill filaments or $\frac{1}{2}$ of eye; 1 to 3 above and 3 to 5 below of gill rakers usually rudimentary.

Scales 49 or 50 in lateral line to caudal base and 15? more out over caudal fin; 6 above, 9 below, $1\frac{1}{2}$ predorsal forward to occiput and 26 more forward to front end of snout; 11 rows of large scales across cheeks; caudal and anal scaly basally, dorsals naked. Scales with 21 or 23 basal radiating striae; 23 to 48 weak short apical denticles,

1598

Two examples. Manila Bay, Luzon.
December 6, 1907. Length 68 to 80 mm.
A. II - I, 16.

20416. Malampaya River, Palawan.
December 26, 1908. Length 133 mm.
A. II - I, 17, I.

21154. Mansalay, Mindoro.
June 4, 1908. Length 52 mm.
A. II - I, 16, I.

8484. Mantaguin Bay, Palawan.
April 2, 1909. Length 300 mm.
A. II - I, 17.

7625. Mouth of Malampaya
River and vicinity. December 26, 1908.
Length 258 mm. A. II - I, 17.

Two examples. Iato River tidal.
June 18, 1909. Length 52 to 74 mm.
A. II - I, 16 or 17.

20330. Naujan River, Mindoro.
June 5, 1908. Length 65 mm. A.
II - I, 16, I.

Sciaena iharal Jordan and Metz,
Mem. Carnegie Mus., vol. 6, no. 1, 1913, p.
37, pl. 7, fig. 2. Fusan, Korea.

Depth $3\frac{1}{2}$ to $3\frac{4}{5}$; head $3\frac{1}{8}$ to $3\frac{1}{4}$, width
 $1\frac{7}{8}$ to $2\frac{1}{5}$. Snout $3\frac{1}{5}$ to $3\frac{1}{2}$ in head from
snout tip; eye $4\frac{1}{2}$ to 5, $1\frac{1}{3}$ to $1\frac{1}{2}$ in snout,
 $1\frac{1}{4}$ to $1\frac{2}{5}$ in interorbital; maxillary reaches
 $\frac{1}{2}$ in eye, expansion $1\frac{2}{5}$ to $1\frac{1}{2}$ in eye, length
2 to $2\frac{1}{5}$ in head from snout tip; mouth
terminal, mandible slightly protruding;
2 pairs of pores at chin, hind pair larger;
rather narrow bands of villiform teeth
in jaws, outer upper rows as canines
with 4 at least partly exposed with
closed jaws and inner row of mandible
distinctly enlarged; interorbital $3\frac{1}{4}$ to 4,

Two examples. Port Janelo, ¹⁵⁹⁹
Luzon. July 13, 1908. Length 50 mm.
A. II - I, 17.

One example. Port San Pio Dinto,
Carriguin Island. March 11, 1908.
Length 68 mm. A. II - I, 17.

Seventeen examples. Tilig, Lubang.
July 14, 1908. Length 53 to 84 mm.

7546. Ayana River, Legaspi.
June 7, 1909. Length 84 mm.
A. II - I, 16, I.

Four examples. Kema, Celebes, Dutch
East Indies. November 13, 1909.

Length 69 to 77 mm. A. II - I, 16 or 17.

12862, 14135, 21263, 21485. Tifer
Bay, Borneo. December 10, 1909.

Length 68 to 134 mm. A. II - I, 16 or 17.

1553

vol. 6, no. 4, 1914, p. 258 (Matsushima Bay; Osaka).

Nibe schlegeli Jordan and Hubbs, Mem. Carnegie Mus., vol. 10, no. 2, June 27, 1925, p. 243 (Shizuoka, Osaka, Tokyo, Kobe, Mikawa Bay, Misaki, Fukuoka, Fuku, Miyazu).

Corvina yeddoensis (Döderlein) Steindachner and Döderlein, Denkschr. Akad. Wiss. Wien, math.-naturw. Klasse, vol. 48, pt. 1, 1884, p. 35. Jeddo. (name in text.)

Sciaena nibe Jordan and Thompson, Proc. U. S. Nat. Mus., vol. 39, 1911, p. 258, fig. 4. Wakanoura.

Nibe nibe Jordan and Hubbs, Mem. Carnegie Mus., vol. 10, no. 2, June 27, 1925, p. 243 (Osaka market; Mikawa Bay).

U. S. N. M., No. 58012. Zamboanga.
 Dr. E. A. Mearns. (As Caranx carangus).
 Scutes 25 to 30. Snout tip level with
 lower eye edge. Length 102 to 125 mm.
 Four examples.

U. S. N. M., No. 71972. Haha, Okinawa.
 Albatross Collection 1906. Length 84 to
 124 mm. (As Caranx farrus? Scutes 30.
 Four examples.

U. S. N. M., No. 89041. Tahiti. J. M.
 Clements. Length 78 to 184 mm. Four
 examples. Scutes 28. Snout tip level
 with lower eye edge.

U. S. N. M., No. 72188. Lubang.
 R. C. Mac Gregor. Length 90 mm.

74

Sydney, 1898, p. 133. — Waite, Records
Australian Mus., vol. 4, 1901, p. 47 (Lord
Howe Island); Mem. New South Wales
Natural. Club, no. 2, 1904, p. 31. — Stead,
Fishes of Australia, 1906, p. 109, fig. 40
(New South Wales, Queensland, Victoria,
Tasmania); Edible Fish. New South Wales,
1908, p. 63, pl. 33. — McCulloch, Zool. Results
Endeavour, vol. 1, pt. 1, sec. 22, 1911, p. 62
(east coast of Australia); Fishes of New
South Wales, ed. 2, 1927, p. 50. — Fowler,
Mem. Bishop Mus., vol. 10, 1928, p. 235
(on Günther).

U. S. N. M., No. 55231. Hawaiian Islands. Bureau of Fisheries (751). Length 140 mm.

U. S. N. M., No. 55557. Hawaiian Islands. Bureau of Fisheries. Length 118 to 132 mm. Two examples.

U. S. N. M., No. 56174. Mindanao. Bureau of Fisheries (4271). Length 90? mm. As Caranx carangus. Scutes 24. Upper lip level with lower eye edge.

U. S. N. M., No. 56241. Zamboanga. ~~Dr. E. A. Mearns~~ Bureau of Fisheries (4272). Length 65 mm. As Caranx carangus. Scutes 27. Snout tip level with lower eye edge.

U. S. N. M., No. 57911. Zamboanga. Dr. E. A. Mearns. Length 73 to 90 mm. Two examples. As Caranx carangus. Scutes 24 to 28. Snout tip level with lower eye edge.

Sillago diadoc Thiollière, Fauna
Woodlark, 1857, p. 151. Woodlark Island.

Sillago insularis Castelnau, Proc. Zool.
Acclimatist. Soc. Victoria, vol. 2, 1873,
p. 113. Noumea, New Caledonia.

Sillago terrae-reginae Castelnau, Proc. Linn.
Soc. New South Wales, vol. 2, 1878, p. 232.
Brisbane, Moreton Bay.

Sillago bassensis (not Cuvier) Castelnau,
Proc. Linn. Soc. New South Wales, vol. 3,
1879, p. 381 (Cape York). — Macleay, Proc.

Linn. Soc. New South Wales, vol. 5, 1881, p. 567
(compiled). — Kent, Great Barrier Reef,
1893, p. 291 (Queensland). — Tosh, Proc.
Royal Soc. Queensland, vol. 17, 1903, p. 175,
pls. 8-14.

A. n. S. P., one example. Delagoa Bay. 1922. H. W. Bell Marley. Length 173 mm.

A. n. S. P., one example. Philippines. 1923. Rev. J. Clemens. Length 80 mm.
As Caranx jarra.

A. n. S. P., one example. Ceylon. Dr. F. Hallberg. 1924. Length 94 mm.

369 (Port Dennison; Cleveland Bay). —
— Schmeltz, Cat. Mus. Godeffroy, no. 7,
1879, p. 44 (Queensland). — Günther,
Rep. Voy. Challenger, vol. 1, 1880, p. 42
(Somerset, Cape York). — Macleay, Proc. Linn.
Soc. New South Wales, vol. 5, pt. 4, 1881, p. 567
(North Australia, Torres Straits, Cape York).
— Woods, Fishes New South Wales, 1882, p. 65,
pl. 24. — Pöhl, Cat. Mus. Godeffroy, no. 9,
1884, p. 32 ("East Indies"). — Ogilby, Cat. Fish.
New South Wales, 1886, p. 31. — McCoy,
Prodromus Zool. Victoria, 1889, pl. 182. —
Kent, Great Barrier Reef, 1893, pp. 292, 370,
pl. 45, fig. 2. — Ogilby, Edible Fish. New South
Wales, 1893, p. 102, pl. 27; Handbook of

Caranx cordylaoides (Meuschen)

Scomber cordylaoides Meuschen,
Index Zoophyl. Gronov., pt. 3, 1781
(on Gronow, Zoophyl., pt. 1, p. 94,
no. 307, 1763, type locality, America).

Caranx (Cesa) cordylaoides Whitley,
Rec. Austral. Mus., vol. 15, no. 5, p.
300, April 6, 1927 (reference).

~~1009~~

75887 U.S.N.M. Borneo. H.C. Raven.
Length 310 mm. Lower gill rakers 20.

84080 U.S.N.M. Hawaiian Islands.
Length 151 mm. In poor preservation.

87046 U.S.N.M. Tahiti. J.M. Clements.
Length 96 to 99 mm. 3 examples.

27150 A.N.S.P. Honolulu. Stanford
University. In exchange. Length 207 mm.
Eye 4 in head. Gill rakers 7+21.

A.N.S.P.

31005 and 31006, Apia, Samoa.
Bureau of Fisheries.

31714 A.N.S.P. Honolulu. Bureau of
Fisheries (03873). Length ~~2~~ 70 mm. Eye 5
in head. ~~Lower~~ Gill rakers 9+18.

Scomber cordyla (part) Linnaeus,
Syst. Nat., ed. 10, pt. 1, p. 298, 1758
 (part); ed. 12, pt. 1, p. 493, 1766
 (part). — Gmelin, Syst. Nat.
Lin., pt. 1, p. 1332, 1789 (part). —
Schneider, Syst. Ichth. Bloch,
 p. 23, 1801 (part).

Scomber cordila Bonnaterre,
Tabl. Ichth., p. 139, pl. 58, fig. 229,
 1788 (part).

Trachurus cordyla Gray, Cat. Fish.
Granow, p. 124, 1854 (part).

56999 U.S.N.M. Apia. ~~1888~~ Bureau
of Fisheries. Length 131 to 135 mm.
3 examples.

58539 U.S.N.M. Hilo. Bureau of
Fisheries (No. 7627). Length 91 to 119 mm.
22 examples.

65582 U.S.N.M. Hawaiian Islands.
Bureau of Fisheries (No. 3292). Length
167 mm.

65961 U.S.N.M. Hawaiian Islands.
Bureau of Fisheries (A 53). Length 198 mm.

65962 U.S.N.M. Makemo, Tuamotus.
Albatross Collection 1899. Length 95 to 200
mm. 2 examples.

65963 U.S.N.M. Funafuti. Albatross
Collection 1899. Length 97 to 106 mm.
4 examples, in poor preservation.

65964 U.S.N.M. Rangiroa, Tuamotus.
Albatross Collection 1899. Length 133 mm.

Scomber (glaucus) adscensionis
Osbeck, Iter. Chin., vol. 2, p. 94,
1771 (type locality, Ascension
Island, Atlantic). (Inadmissible.)

1606
~~Paranx quara (Bonnaterre)~~

Scomber quara Bonnaterre,
Encyclop. Method., p. 139, pl. 58,
1788 (type locality, America).

— Lacépède, Hist. Nat. Poiss., vol. 2,
pp. 598, 604, 1800.

India, China, Queensland. Also
reported from the Philippines by
Elera. According to Day it reaches
945 mm.

Caranx quara

— Jordan and Evermann, Bull. U. S.
~~Biol. Service~~ Nat. Mus., no. 47, pt. 1,
p. 926, 1896 (copied Steindachner).

— Kendall and Radcliffe, Mem.
Mus. Comp. Zool., vol. 35, p. 99, 1912
(Easter Island).

— Fowler, Proc. Acad. Nat. Sci.
Philadelphia, vol. 81, p. 605, 1929
(Hong Kong); vol. 87, p. 140, 1935 (Bangkok).

below; scales cycloid on head, elsewhere ctenoid; fine scales cover bases of soft dorsal and anal and whole of caudal with age.

D. IX or X, I, 24 or 25, third spine $1\frac{4}{5}$ in head, first ray $2\frac{2}{5}$; A. II, 7, second spine $2\frac{1}{5}$; caudal $1\frac{2}{3}$, rounded in young, cuneate with age; least depth of caudal peduncle $3\frac{3}{4}$; pectoral $1\frac{4}{5}$; ventral $1\frac{2}{5}$.

Silvery, with light streak along each row of scales. Young with dark bluish mark on opercles, less distinct with age. Young with black interspinous dorsal membranes, but only as black outer edge with age. Second dorsal stained gray at upper third. (Day.)

Scomber dentex Schneider, Syst.
Ichth. Bloch, p. 30, 1801 (type
locality, Brazil).

Caranx luna Geoffroy St. Hilaire,
Descript. Egypt. Poiss., pl. 23, 1809
(type locality, Egypt).

Caranx mertensii Cuvier, Hist.
Nat. Poiss., vol. 9, p. 64, 1833
(type locality, Manila).

Caranx (Longirostrum) mertensii
Wakiya, Ann. Carnegie Mus., vol.
15, p. 204, July 1, 1924 (Ryukyu).

Pseudosciaena albida Bleeker, Nederl.

Tijdschr. Dierk., vol. 1, 1863, p. 145

(Amoy); vol. 2, 1865, p. 56 (Amoy).

Sciaena albida Day, Fishes of India,

pt. 2, 1876, p. 188, pl. 44, figs. 4-6 (Calcutta);

Fishes of India^{Fishes}, vol. 2, 1887, p. 117. —

Zugmayer, Abhandl. Kon. Bayer. Akad.

Wiss., math.-physik. Klasse, vol. 26,

band 6, 1913, p. 12 (Mekran). — ¹/₂ Gilby,

Mem. Queensland Mus., vol. 6, December

19, 1918, p. 85 (compiled). — ¹/₃ Malpas, Ceylon

Administr. Rep., 1921, p. E8.

Johnius unee (not Bloch) Blyth, Proc.

Asiat. Soc. Bengal, vol. , 1866, p. 141

(Sitang River).

Corvina neilli Day, Fishes of Malabar,

1865, p. 54. Cochin, Malabar.

Caranx platessa Cuvier, Hist. nat.
Poiss., vol. 9, p. 84, 1833 (type
locality, "la mer des Indes" Péron).
— Fowler, Mem. Bishop Mus., vol.
11, No. 6, p. 405, 1934 (compiled).

— McCulloch, Austral. Mus. Mem.,
No. 5, pt. 2, p. 188, Sep. 10, 1929 (reference).

258
dark band extends from snout tip
through eye and forms distinct
jet black blotch at middle of
caudal at least large as pupil.
Fins all pale or whitish, soft
dorsal and anal each with broad
black basal longitudinal band,
extending out little on each fin
posteriorly. Iris, except as crossed
by dark longitudinal bands pale or
whitish.

Malaysia, Philippines, Polynesia.

Caranx (Longirostrum) platessa
Wakiya, Ann. Carnegie Mus., vol.
15, p. 203, July 1, 1924 (Nagasaki).

behind broad band of smaller ones.
No molars. Scales very small, about
116. Cheeks scaly. Opercles, except
upper angle, naked. Vertical fin
finely scaled. Dorsal spines 14.

Coromandel, Pondichery). $\frac{1}{m}$ Günther, Cat.
Fishes Brit. Mus., vol. 2, 1860, p. 304 (China).
 $\frac{1}{m}$ Day, Fishes of Malabar, 1865, p. 54. $\frac{1}{m}$
Castelnau, Proc. Linn. Soc. New South Wales,
vol. 3, 1878, p. 47 (Northern Australia). $\frac{1}{m}$ Macleay,
Proc. Linn. Soc. New South Wales, vol. 5, 1881,
p. 521 (Mormon River).

Corvina olvida Elera, Cat. Fauna Filipinas,
vol. 1, 1895, p. 502 (Luzon; Manila). (Error.)

Caranx chilensis Guichenot, Hist.
 Chili, Gay, Zool., vol. 2, p. 238, ^{35, pl. 6, fig. 2,}
 1848 (type locality, "Isla de
 Juan Fernandez") Atlas, pl. 6, fig. 2,
 1854. — Günther, Cat. Fish. Brit. Mus.,
 vol. 2, p. 439, 1860 (copied). — Delfin, Cat.
 Peces de Chile, p. 54, 1901 (reference).
Caranx leptolepis (not Cuvier) Günther,
 Cat. Fish. Brit. Mus., vol. 2, p. 440,
 1860 (part).

Caranx georgianus (not Cuvier)
Günther, Cat. Fish. Brit. Mus., vol.
 2, p. 440, 1860 (part).

14021. Aparri, Luzon. November 19, 1908.
Length 68 mm.

8852. Catbalogan, Samar. April 15, 1908.
Length 128 mm.

5965, 5973, 5974, 5975. Cavite market.
December 1, 1908. Length 74 to 114 mm.

6000 [730]. Cavite market. February 21,
1908. Length 218 mm.

22539. Dagupan, Luzon. March 18, 1908.
Length 105 to 108 mm. 2 examples.

6545. Line fisherman off Daet. June 15,
1909. Length 168 mm.

^{18446,}
18444, 18445, 18447. Manila market.

May 4, 1908. Length 144 to 163 mm.

9266. Manila market. July 10, 1908. Length 194 mm.

1 example. Manila market. December 12-18,
1907. Length 124 mm.

Caranx delicatissimus (Döderlein)
Steindachner and Döderlein,
 Denks. Akad. Wiss. Wien, math.
 naturw. Kl., vol. 49, p. 184,
 1884 (1885) (type locality,

— Jordan and Snyder, Annot. Zool.
 Japon., vol. 3, p. 67, 1901 (reference).
 — Snyder, Proc. U. S. Nat. Mus.,
 vol. 42, 1912, p. 411 (Misaki).

Caranx (Longirostrum) delicatissimus
Wakiya, Ann. Carnegie Mus., vol. 15,
 p. 203, pl. 28, fig. 3, July 1, 1924
 (Kii; Miyako; Tokyo Bay).

Depth $3\frac{1}{4}$ to $3\frac{1}{3}$; head $3\frac{1}{3}$. Snout
4 in head; eye 4 to 7, 1 to $1\frac{1}{4}$ in snout;
maxillary reaches $\frac{2}{3}$ or to hind eye edge,
length $2\frac{1}{2}$ to $2\frac{2}{3}$ in head; jaws equal
or upper slightly longer; mouth cleft
slightly oblique; 3 pores across knob below
mandibular symphysis behind base of
which large open pore and 2 more on side
of either ramus; short barbel between
central pore and anterior lateral one
and very minute one at posterior pore;
teeth in villiform bands, outer upper row
and lower inner row enlarged; interorbital
low; preopercle edge serrate in young,
entire with age.

Scales 55 to 60 along above lateral
line, ^{to caudal base} 50 to 55 along below; 7 above, 18

Caranx cheilio Snyder, Bull. U. S. Fish Comm., vol. 22, p. 524, pl. 8, fig. 14, 1902 (1904) (type locality, Honolulu). — Jordan and Evermann, Bull. U. S. Fish Comm., vol. 23, pt. 1, p. 196, 1903 (1905) (copied).

Caranx cheilio Regan, Proc. Zool. Soc. London, 1913, p. 370 (Easter Island). — Fuentes, Bolet. Mus. nac. Chile, vol. 7, no. 1, p. 300, pl. 16, 1914 (Easter Island). — Nichols, Amer. Mus. Novit. N. Y., no. 50, p. 2, October 24, 1922 (Honolulu). —

1544
72688 U.S.N.M. Java. Bryant
and Palmer. Length 68 mm.

1 example. A.N.S.P. Bombay, India.
Bombay Natural History Society. Length
182 mm.

47595 A.N.S.P. Philippines. Commercial
Museum of Philadelphia.

47650 A.N.S.P. Philippines. Commercial
Museum of Philadelphia. Length 178 mm.

As *Argyrosomus goldmani*.

— Fowler and Ball, Bull. Bishop
Mus., no. 26, p. 12, 1925 (Laysan).

— Fowler, Mem. Bishop Mus., vol. 10,
p. 146, ~~1928~~ pl. 12 C, 1928 (Honolulu;
Laysan; type of Carangus cheilio);
vol. 11, no. 5, p. 326, 1931 (Honolulu).

5025, 5026. Tacloban market. July
25, 1909. Length 175 to 193 mm.

5078. Sandakan, Borneo. March 1,
1908. Length 190 mm.

11834. Sandakan. March 2, 1908.
Length 160 mm.

11461, 11462. Kowloon market. September
8, 1908. Length 123 to 128 mm.

Buka Island, Celebes. November 20, 1909.
A 1024. ^ Length 153 mm.

32719 U.S.N.M. Indian Archipelago.
Royal Museum Leiden. Length 170 mm.

56100 U.S.N.M. San Fabian, Philippines.
Bureau of Fisheries (3709). Length 190 mm.

As Johnius belengeri.

72687 U.S.N.M. Java. Bryant and
Palmer. Length 155? mm.

Depth $2\frac{1}{2}$ to $3\frac{1}{8}$; head $2\frac{3}{5}$ to $3\frac{1}{3}$,
 width 2 to $2\frac{1}{4}$. Snout $2\frac{1}{5}$ to $2\frac{3}{5}$
 in head; eye $5\frac{3}{5}$ to $6\frac{1}{2}$, $2\frac{1}{6}$ to $3\frac{1}{3}$
 in snout, $1\frac{1}{2}$ to 3. in interorbital,
 adipose lids not developed;
 maxillary reaches $\frac{3}{4}$ to $\frac{4}{5}$ to eye,
 expansion $1\frac{1}{3}$ to $1\frac{4}{5}$ in eye,
 length $2\frac{2}{3}$ to $3\frac{1}{5}$ in head from
 snout tip; lips fleshy or
 coriaceous with age; ^{preorbital depth to maxillary end $1\frac{2}{3}$ to $1\frac{3}{5}$ eye diameter} interorbital
^{in head,} $3\frac{2}{3}$ to 4, elevated convexly,
 with median keel. Gill rakers
^{8 to} 12 + ^{17 to} 23, lanceolate, subequal
 with gill filaments or $1\frac{1}{4}$ in
 eye.

Scales 50 + 24 to 38 in
 lateral line, straight section
 $1\frac{1}{5}$ in long arch; 16 to 19 scales
 above middle of arch to soft

dorsal origin, 25 to 29 below.

Breast entirely scaly.

D. VIII - I, 24, I or I, 25, I,
third spine $2\frac{1}{10}$ to $3\frac{1}{5}$ in head,
first branched ray $2\frac{7}{8}$ to $3\frac{2}{3}$,
last ray semi-detached; A.
II - I, 20, I to I, 22, I, first
branched ray $2\frac{3}{4}$ to $3\frac{1}{2}$, last
ray semi-detached; caudal
 $1\frac{1}{6}$ to $1\frac{2}{5}$, deeply forked; ventral
 $2\frac{1}{10}$ to $2\frac{4}{5}$, rays I, 5; pectoral
rays II, 19, fin 3 to $3\frac{1}{8}$ in fish
without caudal.

Back drab or gray, below
and on sides silvery white.
Small round black spot,
well contrasted, on upper hind
edge of opercle, about size of
pupil. Dorsals and caudal brownish,
other fins pale to whitish.

East Indies, Philippines, Siam,
China, Rin Kiu, Japan, Hawaii,
Easter Island, Juan Fernandez.
Also in the tropical Atlantic.

Both the large Philippine examples
listed below show 17 or 18 scutes
in the straight section of the
lateral line, compared with
21 in the Easter Island material.
All have a dark opercular spot
and with black pectoral axillary
blotch visible at origin of
pectoral fin, obscure or faint
in Easter Island example.

Both above have a few irregular
large dark brown to blackish
rounded spots, chiefly on back
and tail, not evident in the
Easter Island specimen. All
show the thick, coriaceous,

papillate lips, lower jaw little shorter or even with upper, breast densely and closely scaled, and last dorsal and anal rays each with terminal half free. Moreover the Philippine specimens both have longer pectoral, which $2\frac{1}{3}$ to $2\frac{2}{3}$ in fish without caudal or $1\frac{1}{4}$ to $1\frac{2}{5}$ times head.

9372. Cebu market. August
28, 1909. Length 380 mm.

8453. Maribojoc, Bohol.
March 26, 1909. Length 630 mm.

is shown with greatly shorter barbels and two dark longitudinal bands, parallel, along upper side of body. The present species approaches ^{Pseud}~~Speneus~~ luteus in most every way, except it is figured by Bleeker with four blue horizontal bands on the head.

50676 U.S.N.M. Hilo, Hawaii. Bureau of Fisheries (no. 3994). Length 196 mm.

52688 U.S.N.M. Hawaiian Islands. Bureau of Fisheries (no. 03936). Length 207 mm.

55517 U.S.N.M. Hawaiian Islands. Bureau of Fisheries (no. 03910). Length 110 mm. As Mulloidex samoensis.

28114 A.N.S.P. Honolulu. Bur. Fisher. (03999). Length 182 mm.

U. S. N. M., No. 22592. Japan.
Japanese Government. Length 310 mm.
As Caranx flavoceruleus.

U. S. N. M., No. 65445. Easter Island.
Albatross Collection. Length 500 mm.

U. S. N. M., No. 92258. Hawaiian
Islands. P. S. Galtsoff. Length 530 mm.
Eye $6\frac{1}{3}$ in head; maxillary reaches $2\frac{3}{4}$
in head. Straight section of lateral
line $1\frac{2}{3}$ in arch. As Caranx cheilio,

Mc Culloch, Fishes New South Wales,
ed. 2, 1927, p. 55.

Depth 3; head 4. Snout $3\frac{7}{8}$ to $4\frac{1}{2}$
in head from snout tip; eye $4\frac{2}{5}$, $1\frac{1}{5}$ to
 $1\frac{1}{4}$ in snout; maxillary reaches half
way in eye, ^{expansion} 2 to $2\frac{1}{5}$ in eye, length
 $2\frac{1}{3}$ to $2\frac{2}{5}$ in head from snout tip;
interorbital convex.

Scales 53 in lateral line to caudal
base and 9 more on latter; ^(5 show on figure) 6, above,
12 below, 6 rows on cheeks. Scales with
more or less complete fine circuli;
37 minute apical marginal points show
on figure, with imperfect submarginal
row.

Caranx bucculentus Alleyne
and Macleay

Caranx bucculentus Alleyne and
Macleay, Proc. Linn. Soc. New South
Wales, vol. 1, pt. 4, p. 326, pl. 11, fig. 1,
March 1877 (type locality, Cape
Grenville, Queensland). — McCulloch, Mem. Queensland Mus.,
vol. 8, pt. 1, p. 67, Jan. 30, 1924
(diagnosis in key); Austral.
Mus. Mem., no. 5, pt. 2, p. 186, Sep. 10,
1929 (reference).

266
median band with blackish area
below last dorsal rays. Fins all
pale, dusky brown. Basal longitudinal
band on soft dorsal and anal, extends
well out on last ray posteriorly.

Red Sea, Arabia, East Africa, Zanzibar,
Mozambique, Natal, Maldives, India,
Nicobars, East Indies, Philippines, Riu
Kiu, China, Japan, Melanesia, Micronesia,
Polynesia.

Depth $2\frac{1}{2}$; head 3. Snout 3 in head; eye $3\frac{1}{5}$, $1\frac{1}{10}$ in snout, $\frac{1}{3}$ eye diameter from upper profile; maxillary reaches $\frac{1}{2}$ in eye, expansion $2\frac{1}{4}$ in eye, length 2 in head; front end of mouth cleft well below level of eye; interorbital greater than eye, slopes up high behind.

Arch of lateral line short, high, reaches only far as middle of first dorsal, nearly 4 in straight section, armed with strong, large scutes (33 shown in course on figure besides 6 continued forward?).

D. VIII - I, 18 (I, 20 in soft fin on figure), second spine $2\frac{7}{8}$ in head, first branched ray $1\frac{2}{5}$,
A. II - I, 16 (I, 22 in soft fin on

figure) first branched ray $1\frac{1}{2}$;
caudal $1\frac{1}{5}$, forked; least depth
of caudal peduncle $5\frac{3}{4}$;
ventral 2; pectoral $2\frac{3}{4}$ in
fish without caudal.

Color silvery, back darker.
Dorsal and caudal tipped
with black. Indistinct dark
opercular spot. Black axillary
spot (shown on figure little less
than pupil at pectoral origin).

Length 250 mm.

(Alleyne and Macleay.)
Queensland, North Australia.

Genus Uraspis Bleeker

Uraspis Bleeker, Nat. Tijds. Ned.
 Indië, vol. 8, p. 417, 1855. (Type
~~Leioglossus~~
~~Uraspis~~ carangoides Bleeker,
 monotypic.)

Leioglossus Bleeker, Nat. Tijds. Ned.
 Indië, vol. 1, pp. 343, 352, 1850. (Type
Leioglossus carangoides Bleeker,
 monotypic.)

Leucoglossa Jordan, Tanaka, Snyder,
 Proc. California Acad. Sci., ^{ser. 4,} vol. 16,
 p. 660, Nov. 14, 1927. (Type

24047. Malampaya Island, east of
Zamboanga. September 8, 1909.
Length 85 mm. Type, no. 68399
U. S. N. M.

23374. Sipadan Island, off
Borneo. September 28, 1909.
Length 70 mm.

Body oblong, compressed. Head moderate. Snout obtuse, rather large. Eye small, little advanced from middle in head length.

Mouth oblique, moderate, front end of mouth cleft level with middle of eye. Maxillary reaches eye. Teeth acute, curved, above biserial, uniserial behind below, or uniserial or biserial in both jaws. Palate and tongue toothless.

Interorbital high. Scales minute, absent from breast though naked area not reaching pectorals. Arch of lateral line about equals straight section, which beveled its entire length. Front dorsal and anal rays not elevated or but little larger than other rays. Caudal well forked. Pectoral subequal with head. Ventral equals or shorter than head.

1627

Characterized by its low dorsal and anal rays, dark coloration and the milk white tongue in great contrast with the rest of the black mouth.

Analysis of Species

a.¹ Uraspis. Scutes with denticles directed backward.

b.¹ Pectoral $2\frac{3}{4}$ in fish without caudal. helvolus.

b.² Pectoral $2\frac{4}{5}$ in fish without caudal. pectoralis.

a.² Leucoglossa. Scutes with denticles directed forward. uraspis.

Uraspis helvolus (^{Schneider}~~Forster~~)

1628

Scomber helvolus (Forster) Schneider,
Syst. Ichth. Bloch, p. 38, 1801
(type locality, Ascension Island,
Atlantic Ocean [= Pacific]). —
Lichtenstein, Descript. Animal.
Forster, p. 415, 1844.

30 predorsal forward to occiput and 18 to 20 more forward to snout end; 13 principal rows across cheek. Scales with 9 to 12 basal radiating striae; 22 to 30 apical denticles, with 6 to 11 transverse series of basal elements; circuli fine.

D. X or XI, I, 29, I or 30, I, third spine 2 to 2 ¹/₈ in head, first ray 3 to 3 ¹/₅; A. II, 7, I, second spine 2 ¹/₅ to 2 ¹/₄ in head or 1 ¹/₈ to 1 ¹/₄ in postocular, first ray 1 ³/₄ to 1 ⁴/₅ in head; caudal 1 ¹/₅ to 1 ¹/₄, cuneate; least depth of caudal peduncle 3 ¹/₄ to 4; pectoral 1 ¹/₂ to 1 ²/₃; ventral 1 ¹/₂ to 1 ³/₅.

Brown, below paler or whitish, with silvery white reflections. On back

1629

Caranx helvolus Günther, Cat. Fish.

Brit. Mus., vol. 2, p. 443, 1862 (type).

Klunzinger, Verh. zool. bot. Gesell. Wien, vol. 21, p. 457, 1871 (Red Sea).

Fowler, Bull. Bishop Mus.,

no. 22, p. 25, 1925 (Honolulu);

Proc. Acad. Nat. Sci. Philadelphia,

vol. 79, 1927, p. 270 (Philippines);

Mem. Bishop Mus., vol. 10, p. 147,

pl. 13 B, 1928 (Honolulu).

Cuvier, Hist. Nat. Poiss., vol. 9, p. 104, 1833
(copied).

Caranx (Hypocaranx) helvolus Klunzinger,
Fische Roth. Meer., vol. 1, p. 96, 1884.

Caranx (Eraspis) helvolus Waksija, Ann.
Carnegie Mus., vol. 15, p. 206, pl. 28, fig.
4, 1924 (Suwajima; Formosa).

1527

young to $1\frac{1}{3}$ with age; maxillary reaches $\frac{3}{4}$ in eye in young to $\frac{1}{2}$ with age, expansion $1\frac{4}{5}$ to 2 in eye, length $2\frac{1}{4}$ to $2\frac{1}{3}$ in head; mouth partly inferior, 5 pores at chin; rather narrow bands of villiform teeth in jaws, outer upper row and inner lower row enlarged, former slightly canine like anteriorly; interorbital $3\frac{7}{8}$ to $4\frac{1}{10}$, broadly convex; preopercle edge finely denticulate, denticles at angle largest. Gill rakers 8 + 13, lanceolate, equal gill filaments or $\frac{1}{2}$ eye; 2 upper and 4 lower gill rakers rudimentary.

Scales 47 to 53 in lateral line to caudal base and 15 to 23 more out over caudal fin; 9 or 10 above, 10 to 12 below;

Carangus helvolus Snyder, Bull.
U. S. Fish Comm., vol. 22, p. 524,
1902 (1904) (Honolulu). — Jordan
and Evermann, Bull. U. S. Fish
Comm., vol. 23, pt. 1, p. 196, pl. 32,
1903 (1905) (Honolulu).

Alepes helvolus Ashida, Philippine
Journ. Sci., vol. 26, no. 3, p. 385,
March 1925 (Tokyo, Formosa)

Hibea albiflora Jordan and Hubbs,
Mem. Carnegie Mus., vol. 10, no. 2,
June 27, 1925, p. 243 (Fukuoka).

Pagrus macrocephalus Basilevsky,
Nov. Mem. Soc. Nat. Moscow, vol. 10,
1855, p. 222, pl. 3, fig. 1. Gulf of Pechili
and Oriental Sea, Peking.

Sciaena ten-lo Basilevsky, ^{Nov. Mem. Soc. Nat. Moscow} ~~op. cit.~~, p.
220, pl. 1, fig. 3. Gulf of Pechili, Peking.

Cowina macrophthalmus Bleeker,
Nederl. Tijdschr. Dierk., vol. 4, 1874,
p. 117 (China).

Depth $3\frac{1}{2}$ to $3\frac{2}{5}$; head $4\frac{7}{8}$ to $3\frac{1}{2}$,
width 2 to $2\frac{1}{4}$. Snout $3\frac{7}{8}$ to 4 in head;
eye $3\frac{2}{3}$ to $5\frac{2}{5}$, equals snout in young
to $1\frac{1}{2}$ with age, equals interorbital in

Caranx micropterus Rüppell, Neue
Wirbelth. Fische, p. 46, pl. 13, fig. 1,
1835 (type locality, Djedda, Red
Sea).

Caranx (Eraspis) micropterus Wabsija,
Ann. Carnegie Mus., vol. 15, p. 206, pl.
30, fig. 2, 1924 (Kii; Ryubye).

229

Amia fasciata (Shaw)

Mullus fasciatus Shaw, Journ. Voy. New South Wales, White, 1790, p. 268, pl., fig. 1. New South Wales. — Walbaum, Cited Pisc., vol. 3, 1792, p. 621 (on Shaw).

Apogon fasciatus ~~Shaw and Gaimard, Voy. Uranie, Zool., pts. 8-9, Jan. 29 - May 26, 1825, p. 344 (Perron).~~ Günther, Cat. Fishes Brit. Mus., vol. 1, 1859, p. 241. (Australia, Port Jackson). — Steindachner, Sitzb. ^{ber.} Akad. Wiss. Wien, vol. 53, pt. 1, 1866, p. 427 (Port Jackson). — Alleyne and Macleay, Proc. Linn. Soc. New South Wales, vol. 1, 1876, p. 267 (Cape Grenville and Darnley Island, Queensland). — Castelnau, Proc. Linn. Soc. New South Wales, vol. 3, 1878, p. (350) 370 (Port Jackson). — Klunzinger, Sitzb. ^{ber.} Akad. Wiss. Wien, vol. 80, pt. 1, 1879 (1880), p. 344 (Port Darwin). — Macleay, Proc. Linn. Soc. New South Wales, vol. 5,

Leucoglossa candens (Jordan,
Evermann, Waksija) Jordan,
Evermann, Tanaka, Proc. Cal.
Acad. Sci., ser. 4, vol. 16, p. 660,
 November 14, 1927 (on Snyder's
 example; Honolulu specimen
 268 mm).

Leucoglossa albilinguis (Jordan,
Evermann, Waksija) Jordan,
Evermann, Tanaka, Proc. Cal.
Acad. Sci., ser. 4, vol. 16, p. 661, pl.
 22, fig. 2, November 14, 1927 (type
 locality, Honolulu).

Case 129

~~Johnia~~ albiflora (Richardson)

Corvina? albiflora Richardson, Ichth.

China Japan, 1846, p. 226; Canton.

Sciaena albiflora Günther, Ann. Mag.

Nat. Hist. London, ^{ser. 4} vol. 12., 1873, p. 378

(Chefoo). ¹/₂ Regan, Ann. Mag. Nat. Hist.

London, vol. 15, ^{ser. 4} series 7, 1905, p. 20

(Inland Sea of Japan). ¹/₂ Jordan and

Thompson, Proc. U.S. Nat. Mus., vol. 39,

1911, p. 249, fig. 2 (Port Arthur, Manchuria).

¹/₂ Jordan and Metz, Mem. Carnegie Mus.,

vol. 6, no. 1, June 1913, p. 36, fig. 27 (Port

Arthur, Fusan, Chinnampo, Korea). ✓

Sciaena (Corvina) albiflora Steindachner,

Denkschr. Akad. Wiss. Wien, math.-

naturw. Klasse, vol. 59, pt. 1, 1872, p. 361

(Shanghai).

1633

Depth $2\frac{2}{5}$; head $3\frac{1}{5}$, width 2.

Snout 3 in head from snout tip; eye $3\frac{1}{2}$, $1\frac{1}{5}$ in snout, $1\frac{1}{4}$ in interorbital; maxillary reaches $\frac{1}{5}$ in eye, expansion 2, length $2\frac{1}{4}$ in head; interorbital $2\frac{7}{8}$, elevated convexly, with median keel. Gill rakers $2+15$, lanceolate.

Scales $67+37$ in lateral line, straight section $1\frac{1}{5}$ in arch.

D. V, I, 27, I, second spine $5\frac{1}{2}$ in total head length, first ray $2\frac{1}{8}$; A. II - I, 21, I, first ray $2\frac{1}{4}$; caudal forked; least depth of caudal peduncle $5\frac{3}{4}$; ventral $2\frac{3}{5}$; pectoral $2\frac{3}{4}$ in fish without caudal.

Gray above, whitish below, with blue, green and violet

tints. Tongue and inside mouth
contrasted conspicuously white.
Fins brown.

Red Sea, Philippines, Formosa,
Red Sea, Japan, Polynesia, Hawaii.

1635
A. N. S. P., one example. Philippines.
1923. Rev. Joseph Clement. Length
220? mm.